United States Department of the Interior

BUREAU OF LAND MANAGEMENT
SALEM DISTRICT OFFICE
1717 FABRY ROAD S.E.
SALEM, OREGON 97306

IN REPLY REFER TO

January 1991

Dear Interested Citizen:

This booklet contains a summary of the analysis of the management situation (AMS) portion of the resource management plan (RMP) we are preparing. The AMS is step 4 in the planning process (see appendix 1). It has been preceded by a series of public involvement efforts (see appendix 2).

The AMS pulls together important information about existing resource conditions, current management direction and management opportunities. (NOTE: Management opportunities are merely possibilities suggested by managers and resource specialists. At this point there are no decisions to accept or reject them.) The AMS provides the baseline for subsequent steps in the planning process, such as design of alternatives and analysis of environmental consequences. It also provides most of the data that will be summarized in the "affected environment" chapter of the environmental impact statement (EIS). Maps in the summary are not detailed due to limitations of scale. More detailed maps and the entire AMS are available for review in the district office.

We have not completed three parts of the timber section - the highest potential allowable sale quantity, the sensitivity analyses, and the demand analyses. We plan to complete them in early 1991. Upon request to Bob Saunders, the RMP team leader (375-5634), copies of the completed analyses will be mailed to any interested individual or group.

Your comments on the information in this AMS Summary or the complete AMS will help us verify its accuracy. If you think we have overlooked or incorrectly described any important information abc ' BLM resources relevant to development of the plan, please let us know.

In addition to comments on the AMS, we are also interested in your suggestions for criteria for formulation of the preferred alternative. At the back of this booklet, in Appendix 3, state director guidance sets forth goals, objectives and criteria for five "common" alternatives we and the other western Oregon districts propose to analyze in our RMP/EISs. We will also analyze a no action (no change) alternative and a yet to be selected preferred alternative which may combine elements from several of these alternatives. If one of the alternatives outlined already fits your objective for a preferred alternative, please let us know. You may wish instead to suggest a new preferred alternative blending elements of the common alternatives, continuation of specific parts of current management direction, or implementation of specific management opportunities identified in the AMS Summary or AMS itself. Feel free to specify other management opportunities you believe are relevant and are not identified in the AMS Summary or AMS.

The BLM must choose a preferred alternative which complies with legal requirements applicable to management of lands it administers. Therefore, in presenting your suggestions for preferred alternative criteria, it would be helpful if you would relate how your suggested criteria would achieve legally required BLM objectives. For most BLM-administered lands in western Oregon, general management objectives are contained primarily in the O&C Act and the Federal Land Policy and Management Act (FLPMA).

A worksheet for your use in commenting on the AMS and/or providing suggestions about the preferred alternative is inserted in the middle of this booklet. It is intended to help you most easily put your comments in the most effective form. Please send us your comments (whether you use the insert or not) by March 1, 1991, so we can consider them as we move ahead with our planning effort. After reviewing comments, we will revise the AMS as appropriate, finish formulating alternatives, analyze their effects and then select a preferred alternative. The draft RMP/EIS reflecting these revisions and steps will be issued for public comment late in 1991.

For those who wish to discuss with BLM managers and staff the information set forth in this booklet, we have scheduled the following open houses:

Corvallis	Nendel's Motor Inns 1550 NW 9th	Jan. 17, 1991	1 p.m., 6 p.m.
Mill City	High School Commons 265 Evergreen	Jan. 23, 1991	1, 3 & 6:30 p.m.
Molalla	High School (north) 357 Francis St.	Jan. 25, 1991	1 p.m., 6:30 p.m.
Salem	BLM District Office 1717 Fabry Rd. SE	Jan. 28, 1991	1 p.m., 7 p.m.
Sweet Home	Public Library Reading Room 13th & Kalmia	Jan. 31, 1991	1, 3 & 6:30 p.m.
Tillamook	BLM Area Office 4610 Third St.	Feb. 5, 1991	7 p.m.
McMinnville	Community Center 600 N. Evans	Feb. 12, 1991	2 p.m., 7 p.m.

We will start each open house session (afternoon and/or evening) with a brief introduction to the land use planning process, information in the AMS and alternatives criteria. During the remainder of the meeting, managers and resource specialists will be available to answer questions to assist you in preparing a written response regarding the AMS and criteria for the preferred alternative.

Thanks for your help with this planning effort. We look forward to your continuing interest and participation.

Van Manning
District Manager

U.S. Department of the Interior
Bureau of Land Management
Salem District
January 1991

Summary
of the
Analysis of the Management Situation
for the
Salem District
Resource Management Plan

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Introduction

This document is a summary of the analysis of the management situation (AMS) for the Salem District of the Bureau of Land Management (BLM). The AMS describes and displays important information about existing resource conditions, current management direction, and management opportunities. (NOTE: Management opportunities are merely possibilities suggested by managers and resource specialists. At this point there are no decisions to accept or reject them.) The AMS provides the baseline for subsequent steps in the planning process, such as design of alternatives and analysis of environmental consequences. Also, it provides most of the data to be included in the affected environment section of the resource management plan/environmental impact statement (RMP/EIS).

Acres displayed in the AMS and summary were derived from four sources - the automated western Oregon digital data base (WODDB), cadastral survey plat acres, the 1980s management framework plans (MFPs) for the district, and miscellaneous inventory records. Where necessary, these sources are cited in the AMS and the summary.

Review of Existing Decisions

Existing decisions and information in related environmental documents have been reviewed to determine which remain valid and may be used for continued use through the 1990s. This review followed the requirements of BLM Manual 1618.2. Not included in the review were existing right-of-way agreements, leases, permits, etc., which constitute valid existing rights through the 1990s.

Table 1 summarizes decisions which we have determined may be carried forward for continued implementation through the 1990s without further environmental analysis. These decisions will be common to all alternatives and will be restated or summarized to incorporate them into the RMP.

Table 2 summarizes decisions which, although determined to be valid for continued implementation through the 1990s, have not been addressed in an EIS or fully supported in terms of analysis. These valid decisions will also be common to all alternatives, but they will be analyzed in the environmental consequences section of the EIS. Any existing decisions not included in tables 1 and 2 will be superseded and replaced by new decisions in the RMP.

The Planning Area

The RMP/EIS will include an analysis of impacts associated with management of approximately 393,600 acres of BLM-administered land and 27,800 acres of subsurface mineral estate where the BLM is the administering agency. This land is located in 13 counties in northwest Oregon as shown in table 3.

For purpose of simplifying analysis, a "planning area" has been delineated. Unlike the Salem District, the planning area does not include any of the Willamette and Mt. Hood National Forests. Portions of the Siuslaw National Forest are within the planning area. The general location of the planning area is delineated on map 1. Map 2 shows general land status within the planning area.

Air Resources

Congress passed the Clean Air Act in 1967 and amendments to the Act in 1972 and 1977. This law gives the state responsibility for administration and enforcement of air quality standards along with visibility standards in Class I areas (special areas protected for their air quality related values during the period of high recreational use; specifically, Crater Lake National Park and certain wilderness areas), through their State Implementation Plan (SIP). The SIP also specifies a 22 percent reduction in emissions (compared with 1982-1984 emissions) by the end of the year 2001, with a review in 1990 to determine whether or not "reasonable progress" has been made. The State Visibility Protection Plan, adopted in 1986, substantially constrains slash burning from July 4 through Labor Day, to reduce the frequency of visibility impairment in Class I areas.

The Oregon Smoke Management Plan, which is companion to the SIP, classified certain areas as "designated areas" and "smoke sensitive areas." The current management plan requires that prescribed burning (which is primarily slash burning) be done only when atmospheric conditions prevent smoke from deteriorating air quality of these areas.

Map 3 shows those "designated areas", "smoke sensitive areas", Class I areas, and Class II areas with potential of becoming Class I areas (wilderness areas over 10,000 acres) that have the potential of

Table 1. Decisions to be carried forward for continued implementation without further environmental analysis.

Decision	Acres	Rationale for continued management
1. Manage Yaquina Head Outstanding Natural Area, an Area of Critical Environmental Concern (ACEC)	106	Congressionaly designated
2. Manage Table Rock Wilderness Area	6,020	Congressionally designated
3. Manage Sandy Wild and Scenic River (recreation status)	548	Congressionally designated
4. Manage Salmon Wild and Scenic River (recreation status)	515	Congressionally designated
5. Manage Quartzville Wild and Scenic River (recreation status)	1,789	Congressionally designated
6. Control noxious weeds through an integrated pest management approach	varies annualy	Approved record of decision

Source: WODB

Table 2. Decisions to be carried forward for continued implementation but which require further environmental analysis.

Decision	Acres	Rationale for continued management
1. Protect Elk Creek bald eagle habitat area	390	Federally-listed threatened species
2. Operate Wildwood Recreation Site	493	Major investment in facilities
3. Operate Fishermens Bend Recreation Site	141	Major investment in facilities
4. Allow full development of existing communication sites	35	Major investment in facilities; potential for expansion
5. Allow full development of high voltage transmission lines	163	Major investment in facilities; potential for expansion

Sources: WODB and MFPs

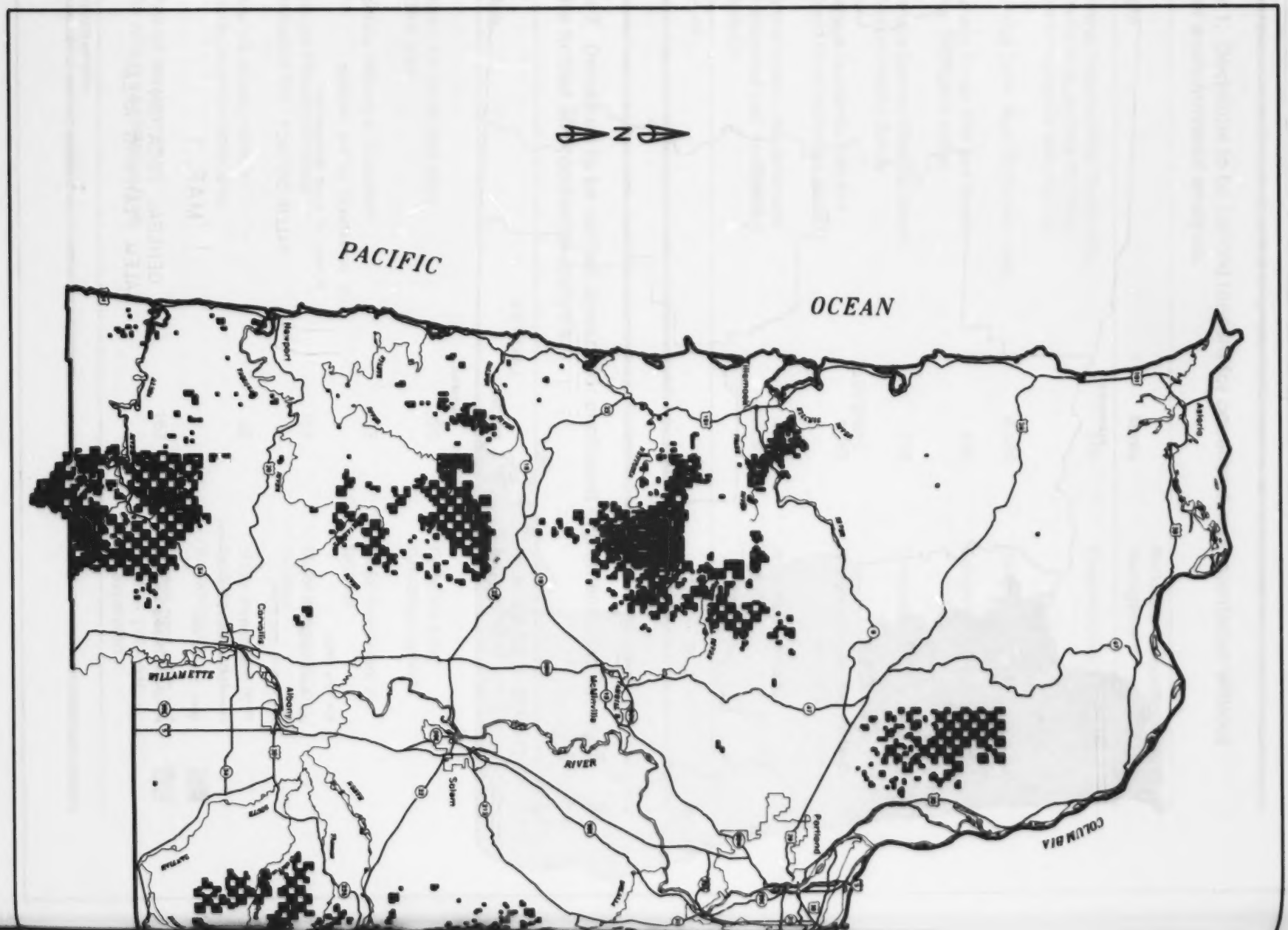
- BLM State Office
- BLM District Office
- BLM Resource Area Office
- District Boundary
- Klamath Falls Planning Area Boundary
- Salem Planning Area
- Other Western Oregon Resource Management Planning Areas

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

SALEM DISTRICT

MAP 1

GENERAL LOCATION
SALEM PLANNING AREA


N
PACIFIC
OCEAN
WILLAMETTE
RIVER
COLUMBIA
Salem
Portland
McMinnville
Corvallis
Albany

LEGEND

- District Office
- Interstate Highway
- U.S. Highway
- State Highway
- District Boundary
- Highway
- Stream
- Urban Area
- City
- BLM Managed Lands

SALEM DISTRICT
1990 AMS SUMMARY

MAP 2: LAND STATUS

Table 3. BLM-administered acreage in the Salem District by county

Public County	O&C[1]	Domain[2]	Total
Benton	51,600	6,100	57,700
Clackamas	49,600	16,900	66,500
Clatsop[3]	0	0	0
Columbia	11,000	0	11,000
Lane	8,500	400	8,900
Lincoln	8,400	11,800	20,200
Linn	68,300	2,200	70,500
Marion	20,700	200	20,900
Multnomah	4,200	0	4,200
Polk	40,100	700	40,800
Tillamook	27,400	20,700	48,100
Washington	11,400	600	12,000
Yamhill	31,500	1,300	32,800
Total	**321,700**	**71,900**	**393,600**

Source: WOODB

[1]Public lands granted to the Oregon and California Railroad Company and subsequently revested to the United States.
[2]Original federal lands which were not transferred to other jurisdictions and which continue to be managed by the United States.
[3]Clatsop County (40 acres) - less than 50 acres so rounded to zero.

being affected by the district's prescribed burning activities. Nonattainment areas (areas not in compliance with air quality standards), which may also be affected, are Eugene/Springfield, Portland, and Salem.

The amounts and types of smoke emissions from prescribed burning are dependent primarily on burning method (broadcast burning or piling and burning of slash), tree species burned, the amount and proportion of fuel consumed by burning, and weather conditions. Approval of burning is unlikely when smoke dispersal is poor. Average fuel (biomass) consumption is estimated to have declined from 60 tons per acre burned during the baseline period of 1976-1979 to 44 tons per acre burned by 1984.

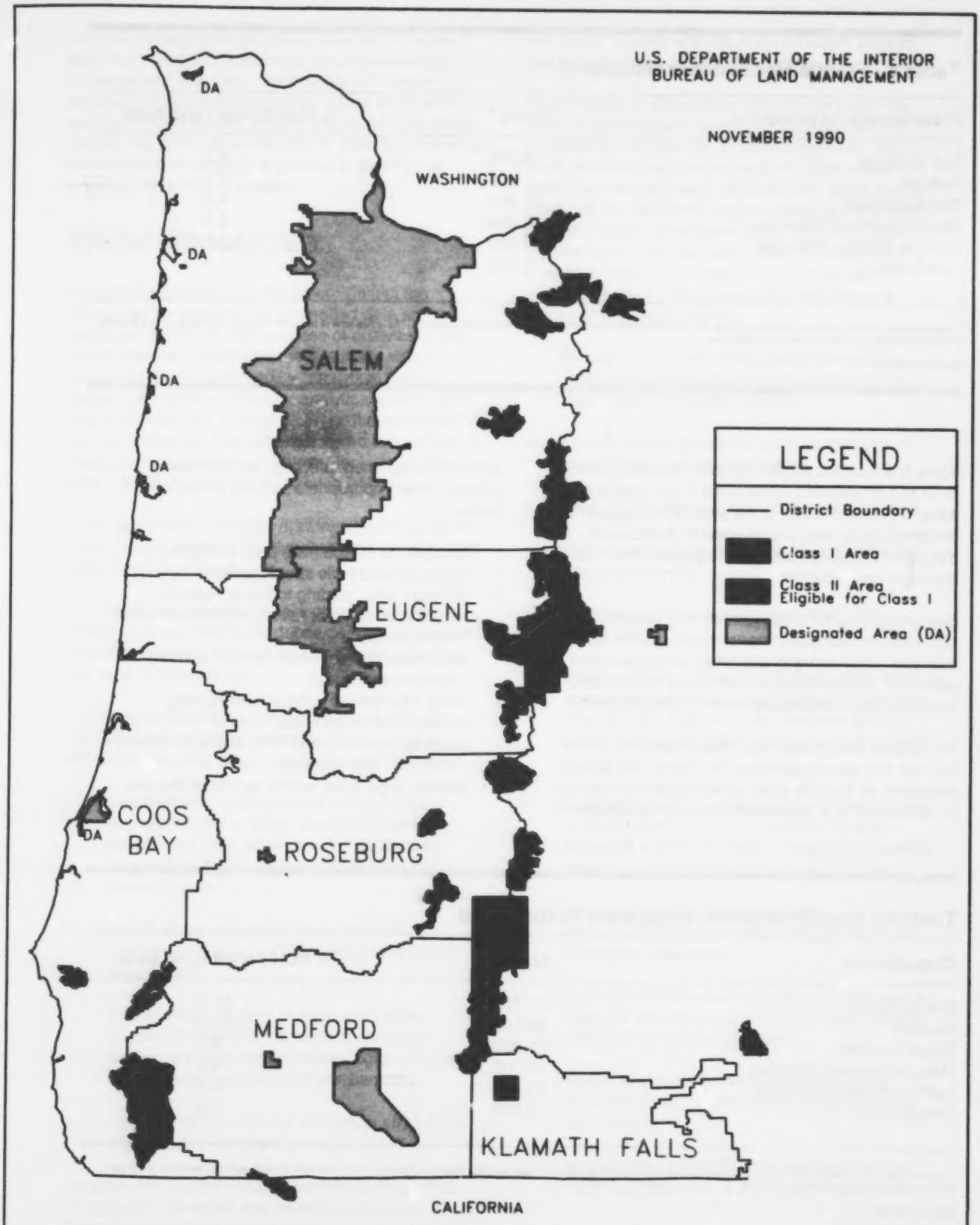
Due to burning restrictions, the acreage of slash burned has declined in recent years. Average annual district slash consumption during the baseline period was 96,600 tons, during the 1982-84 period 100,121 tons, and during the 1985-1988 period 93,137 tons. The 1985-88 average is a 3.6 percent reduction from the baseline period average. From 1984 through 1987, fourteen (14) of the 372 BLM burns in the planning area caused smoke intrusions into designated areas.

In addition to adherence to seasonal and other timing restrictions imposed by the Oregon Smoke Management Plan, BLM has taken many other steps to reduce emissions from burning. These include mass ignition, aggressive mop-up, slash piling, and burning only where considered necessary to make tree planting possible or to reduce fire hazard.

Opportunities that can be considered to further reduce emissions include increased wood utilization and use of alternative site preparation methods where feasible.

Soil Resources

Table 4 shows the fragile nonsuitable woodland portion of BLM-administered forest lands in the planning area identified in the recent timber production capability classification (TPCC) inventory (see end of appendix 3). These lands are considered inappropriate for planned timber harvest. If they were managed for timber production, future soil productivity would be reduced even if special harvest and/or restrictive measures were applied.



MAP 3: SENSITIVE AIR QUALITY AREAS

Table 4. Fragile Nonsuitable Woodland

Classification of Woodland	Acres[1]	% BLM Forest Land Base
Soil Moisture	16,700	4.6
Nutrient	200	0.0
Slope Gradient	17,600	4.8
Mass Movement Potential	1,200	0.3
Surface Erosion Potential	7,600	2.1
Groundwater	5,000	1.4

[1]Approximately 12,400 acres in the forest land base are counted under more than one fragile nonsuitable category. The actual total of nonsuitable fragile woodlands, minus overlaps, is 35,000 acres or 9.8 percent of the forest land base.

Source: WOODB

Table 5 shows the fragile suitable, restricted portion of BLM-administered forest lands in the planning area. These are forest lands subject to unacceptable soil productivity loss unless special restrictive or mitigation measures are used to protect them during management activities.

Soil productivity has been affected by management activities, including road construction, timber harvest activities, slash burning and other site preparation activities. These activities can cause erosion and nutrient losses and reduce water holding capacity.

To mitigate soil productivity losses related to timber harvest and site preparation, the district has applied standards to limit the areal extent of soil compaction to 12 percent of a harvested unit and has employed special management practices for minimizing impacts where appropriate such as those listed below:

- designation of skid trails prior to logging
- ripping of skid trails after logging
- limiting tractor yarding to the dry season
- requiring one-end or full log suspension when cable yarding
- prescribed burning when the duff is moist to achieve cool burns
- using alternatives to broadcast burning
- putting unsurfaced roads "to bed"
- seeding, mulching and fertilizing road cutbanks, fill slopes and landings
- leaving large-down woody debris on the site

Table 5. Fragile Suitable, Restricted Forest Land

Classification	Acres[1]	% BLM Forest Land Base
Soil Moisture	77,700	21.2
Nutrient	60,100	16.4
Slope Gradient	23,600	6.4
Mass Movement Potential	17,700	4.8
Surface Erosion Potential	15,500	4.2
Groundwater	10,600	2.9

[1]Approximately 83,400 acres in the forest land base are counted under more than one fragile suitable, restricted category. The actual total of fragile suitable, restricted is 151,800 acres or 41.4 percent of the forest land base.

Source: WOODB

Current management practices have not, however, fully minimized soil productivity losses caused by management activities. Opportunities to further reduce or mitigate those losses include fertilization, expansion of practices already employed, extending rotation ages on the poorer site classes and following a management strategy to provide a growth loss impact of less than 1 percent.

Water Resources

Analytical watersheds in the Salem District are delineated on map 4a and watershed data are displayed in table 6. For purpose of analysis in the environmental impact statement, surface water resources will be analyzed by "analytical" watersheds. (A condition index for analytical watersheds was to be included in table 6. Since the technique for this calculation has not been tested and refined, it could not be completed in time for inclusion in the table. It will be included in the draft RMP/EIS.)

Community water systems drawing water from BLM-administered lands in the planning area are shown in table 7 and on map 4b.

The district has mapped fragile areas which have potential for sediment and debris delivery to streams (see Soils section). Special management practices are used in these areas.

The Oregon Department of Environmental Quality (DEQ) has identified the following rivers, located within the planning area, as water quality limited:

- Tualatin River - quality of water may affect aquatic life due to a low level of dissolved oxygen and high nitrate levels; aesthetics affected by algal growth resulting from high nutrient levels.
- Yamhill River - quality of water may affect aquatic life due to pH; aesthetics affected by algal growth.
- Pudding River - quality of water may affect aquatic life due to a low level of dissolved oxygen and high nitrate levels; contact recreation affected by fecal coliform bacteria.
- Calapooia River - contact recreation affected by high levels of fecal coliform bacteria.

Groundwater is used throughout the planning area for irrigation, domestic and municipal supplies. Ground water quality is generally good, except for a few local problems with mineralized water, arsenic and local pollution of shallow aquifers.

Water quality is affected by management activities on BLM-administered lands, particularly road construction, timber harvest and slash disposal. All of these activities may cause sedimentation, while timber harvest and slash disposal may affect stream temperature, dissolved oxygen concentrations and chemical quality of surface water. Herbicide spraying and fertilization may also affect chemical quality of surface water. To mitigate impacts on water quality, the district has established the following management requirements:

- No planned timber harvest within the riparian zone on second order streams with fish and on third order and larger streams.
- Special logging practices, such as full suspension of logs, where appropriate.
- Road construction to state-of-the-art standards.
- Rock or pave roads needed for future management operations.

Opportunities to improve management of water quality include:

- Provide 50 foot undisturbed buffers along first and second order streams to maintain stream channel and bank integrity, maintain stream temperatures and filter sediments from upslope activities.
- Rip existing and proposed natural surface roads to restore infiltration and minimize erosion. Minimize erosion by ripping subgrade, installing barriers, and revegetating where necessary.
- Develop models to improve prediction of the impacts of various management practices on watershed resources.
- Work with communities and other landowners to manage off-road vehicle use in areas that are within community watersheds.
- Provide total protection for extremely steep unstable areas located within timber sale unit boundaries.
- Use extended timber harvest rotations to minimize the frequency of entries on fragile sites.

Astoria
COLUMBIA
OCEAN
PACIFIC
Portland
Tillamook
McMinnville
Salem
Albany
Corvallis
Newport
WILLAMETTE
2
3
5
7
8
9
12
18
19
20
21
22
24
N

Analytical Watershed Key

1 = East Fork Nehalem
2 = Klichis Frontal
3 = Clear Creek (Klichis)
4 = Moon Creek
5 = Bear Creek
6 = Elk Creek (Nestucca)
7 = Upper Nestucca
8 = Testament Creek
9 = Bible Creek
10 = Upper Willamina
11 = Rowell-Gold Creek
12 = Goosenack Creek
13 = North Fork Siletz
14 = Mill Creek
15 = Upper Rickreall Creek
16 = Pedee Creek
17 = Fall Creek
18 = North Fork Alsea
19 = Crooked Creek
20 = Alsea Frontal
21 = Lower South Fork Alsea
22 = Upper South Fork Alsea
23 = Lower Lobster
24 = Upper Lobster
25 = Table Rock Fork
26 = Upper Molalla River
27 = Quartzville Creek

LEGEND

- District Office
- Interstate Highway
- U.S. Highway
- State Highway
- District Boundary
- Highway
- Stream
- Urban Area
- City
- Analytical Watershed

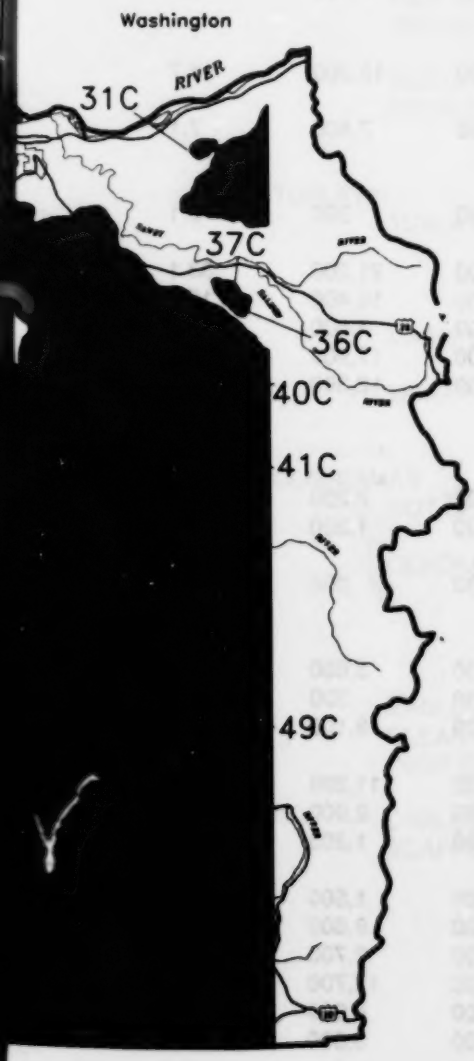
SALEM DISTRICT
1990 AMS SUMMARY

MAP 4A: ANALYTICAL WATERSHEDS

PACIFIC
OCEAN
COLUMBIA
Astoria
Portland
McMinnville
Salem
Albany
Corvallis
Newport
WILLAMETTE
RIVER
1C
4C
5C
6C
7C
8C
9C
10C
11C
33C
34C
15C
16C
17C
20C
22C
23C
24C
25C
27C
28C
29C
30C
44C
45C
46C
47C
52C
55C

Community Watershed Key

1C = Scappoose 01, 02, & 03	20C = Depoe Bay W.D. 01 & 02	38C = Canby Utility
2C = Hillsboro Cherry Grove	21C = Siletz 01	39C = Colton W.D.
3C = Hillsboro - Forest Grove	22C = Falls City 01	40C = Oregon City 01
4C = Fairview 02 & 03	23C = Monmouth	41C = Oregon City 02
5C = Yamhill	24C = Siletz 02	42C = Molalla
6C = Tillamook	25C = Toledo W.U. 02	43C = Estacada
7C = Beaver W.D. 01	26C = Philomath	44C = Scotts Mills W.D. 02
8C = McMinnville-H	27C = Corvallis 03	45C = Silverton 01 & 02
9C = McMinnville-W	28C = Corvallis 02	46C = Stayton
10C = McMinnville-N	29C = Corvallis 01	47C = Salem Public Works
11C = Carlton	30C = Waldport 03	48C = Lyons Mehama W.D.
12C = Sheridan 01, 02, 03, & 04	31C = Corbett W.D. 01 & 02	49C = Mill City
13C = Amity	32C = Portland Bureau W.W.	50C = Gates
14C = Sheridan 04	33C = Lake Oswego M.W.	51C = Jefferson
15C = Panther Creek W.D.	34C = Oregon City 03	52C = Albany
16C = Bear Creek Hideout	35C = Clackamas W.D.	53C = Lebanon
17C = Rose Lodge Water Co.	36C = Sandy	54C = Sweet Home
18C = K.G. & L. Beach	37C = Alder Creek Barlow	55C = Brownsville
19C = Dallas		



LEGEND

- District Office
- Interstate Highway
- U.S. Highway
- State Highway
- District Boundary
- Highway
- Stream
- Urban Area
- City
- Community Watershed

SALEM DISTRICT
1990 AMS SUMMARY

MAP 4B: COMMUNITY WATERSHEDS

TABLE 6. SALEM DISTRICT WATERSHEDS

STATE PLANNING BASIN / USGS HYDROLOGIC UNIT / MAJOR WATERSHED(6th) / SUBWATERSHED(6th)	Watershed Acres	BLM (acres)	Percent (%) in BLM
WILLAMETTE BASIN			
UPPER WILLAMETTE			
MUDDY CREEK	101,400	5,500	5.4
MARYS RIVER	90,500	7,900	8.8
* PEDEE CREEK	7,700	2,100	27.6
UPPER LUCKIAMUTE R	67,400	4,500	6.7
LITTLE LUCKIAMUTE R	35,000	1,700	5.0
NORTH SANTIAM			
LITTLE N FK SANTIAM	70,900	13,200	18.7
NORTH SANTIAM RIVER			
N SANTIAM FRONTAL	106,900	7,600	7.1
SOUTH SANTIAM			
UPPER SOUTH SANTIAM	189,600	300	0.1
MIDDLE SANTIAM RIVER			
* QUARTZVILLE CREEK	64,000	21,200	33.1
LOWER MIDDLE SANTIAM	69,500	10,400	15.0
HAMILTON MCDOWELL	42,700	4,600	10.8
CRABTREE CREEK	94,400	17,900	19.0
THOMAS CREEK	74,700	12,300	16.5
MIDDLE WILLAMETTE			
RICKREALL CREEK			
* UPPER RICKREALL CK	8,800	2,200	32.6
LOWER RICKREALL CK	15,000	1,200	7.8
ABERNETHY CREEK			
ABERNETHY CREEK	10,900	300	2.5
YAMHILL			
UPPER SOUTH YAMHILL	86,300	3,600	4.2
ROCK CREEK (YAMHILL)	11,800	300	2.5
* ROWELL-GOLD CREEK	10,600	3,100	29.6
WILLAMINA CREEK			
* UPPER WILLAMINA	25,500	11,200	44.1
COAST CREEK	14,400	2,900	20.4
WILLAMINA FRONTAL	13,300	1,200	9.0
SOUTH YAMHILL RIVER			
DEER CREEK	12,300	1,500	11.8
* MILL CREEK	22,100	9,600	43.3
* GOOSENECK CREEK	6,200	2,700	43.8
NORTH YAMHILL RIVER	109,900	12,700	11.6
UPPER NORTH YAMHILL	41,700	8,900	21.3
PANTHER CREEK	35,400	3,800	10.8

TABLE 6. SALEM DISTRICT WATERSHEDS (continued)

STATE PLANNING BASIN / USGS HYDROLOGIC UNIT / MAJOR WATERSHED(5th) / SUBWATERSHED(6th)	Watershed Acres	BLM (acres)	Percent (%) in BLM
MOLALLA-PUDDING			
MOLALLA RIVER			
MOLALLA FRONTAL	48,800	7,200	14.8
NORTH FORK MOLALLA	36,300	6,700	18.6
* TABLE ROCK FORK	23,000	13,800	60.3
* UPPER MOLALLA RIVER	22,500	10,800	48.3
MILK CREEK	61,400	3,600	5.8
ABIQUA CREEK			
ABIQUA CREEK	31,500	1,800	5.7
BUTTE CREEK	30,900	3,800	12.4
ROCK CREEK			
ROCK CREEK (PUDDING)	24,900	1,400	5.5
TUALATIN			
TUALATIN RIVER			
SCOGGINS CREEK	25,200	1,300	5.1
LEE CREEK	24,400	2,500	10.2
TUALATIN FRONTAL	32,100	33	0.1
DAIRY CREEK	105,100	4,000	3.8
EAST FORK DAIRY CK	25,800	3,800	14.7
MCKAY CREEK	40,900	2,500	6.1
UPPER MCKAY CREEK	25,000	2,500	10.0
CLACKAMAS			
HOT SPRINGS FORK COLLAWASH			
HOT SPRINGS FORK	24,600	900	3.7
CLACKAMAS RIVER			
CLACKAMAS FRONTAL	5,100	1,000	19.6
NORTH FORK CLACKAMAS	20,300	600	3.1
SOUTH FORK CLACKAMAS	17,200	2,900	16.9
FISH CREEK	30,200	400	1.2
EAGLE CREEK	49,700	4,000	8.0
CLEAR CREEK (CLACK)	39,600	4,500	11.4
DEEP CREEK			
DEEP CREEK	5,700	500	8.5
L WILLAMETTE FRONTAL	9,300	300	3.5
SCAPPOOSE RIVER			
MILTON CREEK	19,800	300	1.4
MULT CHANNEL FRONTAL	11,900	39	0.3
NORTH FORK SCAPPOOSE	20,500	2,900	14.3
SOUTH FORK SCAPPOOSE	17,300	3,000	17.1

TABLE 6. SALEM DISTRICT WATERSHEDS (continued)

STATE PLANNING BASIN / USGS HYDROLOGIC UNIT / MAJOR WATERSHED(5th) / SUBWATERSHED(6th)	Watershed Acres	BLM (acres)	Percent (%) in BLM
NORTH COAST BASIN			
LOWER COLUMBIA-CLATSKANIE			
CLATSKANIE	24,000	800	3.4
NEHALEM			
NEHALEM RIVER	632,300	4,500	0.7
* EAST FORK NEHALEM	14,200	4,400	30.6
WILSON-TRASK-NESTUCCA			
KILCHIS RIVER	41,300	2,900	7.1
LITTLE SO FK KILCHIS	7,600	700	9.5
* CLEAR CK (KILCHIS)	2,800	1,300	47.3
* KILCHIS FRONTAL	2,800	900	30.3
WILSON RIVER	121,200	3,500	2.9
LITTLE N FK WILSON	12,600	1,800	14.3
WILSON FRONTAL	10,500	1,700	16.4
TRASK RIVER			
TRASK FRONTAL	13,200	2,300	17.6
NORTH FORK TRASK	51,200	5,700	11.1
SOUTH FORK TRASK	33,500	900	2.6
TILLAMOOK RIVER			
MUNSON CREEK	1,800	200	12.3
NESTUCCA RIVER			
* UPPER NESTUCCA	16,600	11,200	67.7
* ELK CREEK (NESTUCCA)	6,300	5,100	81.1
* BEAR CREEK	3,900	3,200	81.4
* TESTAMENT CREEK	4,400	2,900	66.0
* BIBLE CREEK	4,800	2,200	46.3
* MOON CREEK	12,600	5,400	42.8
BEAVER CREEK	18,600	1,800	9.6
NESTUCCA FRONTAL	47,900	4,500	9.4
LITTLE NESTUCCA	35,500	200	0.5
SANDY BASIN			
LOWER COLUMBIA-SANDY			
SANDY FRONTAL	81,600	8,100	9.9
BULL RUN RIVER	31,100	100	0.2
MID COAST BASIN			
SILETZ-YAQUINA			
SALMON RIVER	40,700	2,900	7.1
DRIFT CREEK (SILETZ)	21,800	1,900	8.6
	26,300	400	1.5
SILETZ RIVER	191,600	14,200	7.4
* NORTH FORK SILETZ	25,300	10,100	40.1
SOUTH FORK SILETZ	14,400	2,000	13.6
ROCK CREEK (SILETZ)	26,800	1,400	5.2

TABLE 6. SALEM DISTRICT WATERSHEDS (continued)

STATE PLANNING BASIN / USGS HYDROLOGIC UNIT / MAJOR WATERSHED(5th) / SUBWATERSHED(6th)	Watershed Acres	BLM (acres)	Percent (%) in BLM
YAQUINA RIVER			
FEAGLES CREEK	22,200	2,100	9.3
YAQUINA RIVER	172,100	1,100	0.7
ALSEA			
ALSEA RIVER			
* CROOKED CREEK	9,900	4,400	44.7
* NORTH FORK ALSEA	20,700	12,000	57.9
* FALL CREEK	19,200	5,800	30.2
* UPPER SO FK ALSEA	19,700	12,600	63.8
* LOWER SO FK ALSEA	11,900	6,100	51.5
* ALSEA FRONTAL	41,300	14,200	34.4
N ALSEA PACIFIC	34,400	400	1.0
DRIFT CREEK (ALSEA)	44,400	1,200	2.8
ALSEA BAY	43,600	700	1.6
LOBSTER CREEK			
* UPPER LOBSTER	9,100	8,100	89.2
* LOWER LOBSTER	18,500	6,900	37.0
YACHATS PACIFIC	40,500	100	0.3

(*) Indentifies Analytical Watersheds for the Salem District
SOURCE: WODDB

TABLE 7. COMMUNITY WATER SYSTEMS

SYSTEM NAME	SOURCE NAME	POPULATION SERVED	FILTER	WATERSHED AREA (Ac) BLM	OTHER	TOTAL
ALBANY	SOUTH SANTIAM RIVER	33,600	YES	35,910	402,930	438,840
ALDER CREEK BARLOW	ALDER CREEK	250	YES	260	1,080	1,340
AMITY	SOUTH YAMHILL RIVER	1,130	YES	30,930	165,610	196,540
BEAR CR HIDEOUT	CALLOW CREEK	100	YES	80	1,990	2,070
BEAVER W.D.-01	BEAVER CREEK	400	YES	1,790	16,440	18,230
BROWNSVILLE	CALAPOOIA RIVER	1,250	NO	5,100	92,890	97,990
CANBY UTILITY	MOLALLA RIVER	6,200	YES	42,100	177,170	219,270
CARLTON	PANTHER CREEK	1,570	YES	1,110	1,060	2,170
CLACKAMAS W.D.	CLACKAMAS RIVER	20,000	YES	14,980	369,770	384,750
COLTON W.D.	JACKSON CREEK	1,000	YES	510	1,570	2,080
CORBETT W.D.-01	N. FK. GORDON CREEK	2,300	NO	10	810	820
CORBETT W.D.-02	N. FK. GORDON CREEK	2,300	NO	90	670	760
CORVALLIS-01	GRIFFITH CREEK	45,000	YES	0	1,210	1,210
CORVALLIS-02	S. FK. ROCK CREEK	45,000	YES	20	3,310	3,330
CORVALLIS-03	N. FK. ROCK CREEK	45,000	YES	0	1,550	1,550
DALLAS	RICKREALL CREEK	8,950	YES	3,310	15,080	18,390
DEPOE BAY W.D.-01	N. DEPOE BAY CREEK	785	YES	0	650	650
DEPOE BAY W.D.-02	S. DEPOE BAY CREEK	785	YES	10	740	750
ESTACADA	CLACKAMAS RIVER	1,910	YES	5,900	212,640	218,540
FAIRVIEW-02	DONALDSON CREEK	1,864	NO	0	170	170
FAIRVIEW-03	HUGHEY CREEK	1,864	NO	10	640	650
FALLS CITY-01	TEAL CREEK	850	NO	140	2,170	2,310
GATES	NORTH SANTIAM RIVER	350	YES	2,530	186,090	188,620
HILLSBORO CHERRY G.	UPPER TUALATIN RIVER	250	NO	760	14,420	15,180
HILLSBORO F. GROVE	TUALATIN RIVER	35,000	YES	3,900	126,020	129,920
JEFFERSON	SANTIAM RIVER	1,140	YES	87,350	933,830	1,021,180
K.G.& L. BEACH	DRIFT CREEK	2,500	NO	1,880	20,470	22,350
LAKE OSWEGO M.W.	CLACKAMAS RIVER	26,985	YES	14,980	372,400	387,380
LEBANON	SOUTH SANTIAM RIVER	12,000	YES	35,910	400,520	436,430
LYONS MEHAMA W.D.	NORTH SANTIAM RIVER	1,650	NO	19,660	278,950	298,610
MCMINNVILLE-H	HASKINS CREEK	15,000	YES	50	3,930	3,980
MCMINNVILLE-N	NESTUCCA RIVER	15,000	YES	850	1,290	2,140
MCMINNVILLE-W	WALKER CREEK	15,000	YES	1,080	750	1,830
MILL CITY	NORTH SANTIAM RIVER	1,500	YES	4,350	203,780	208,130
MOLALLA	MOLALLA RIVER	3,200	YES	38,580	90,880	129,460
MONMOUTH	TEAL CREEK	5,725	NO	180	2,180	2,360
OREGON CITY-01	SOUTH FORK CLACKAMAS	14,500	YES	2,100	7,450	9,550
OREGON CITY-02	MEMALOOSE CREEK (EMERGENCY)	14,500	YES	580	6,810	7,390
OREGON CITY-03	CLACKAMAS RIVER	14,500	YES	14,980	371,920	386,900
PANTHER CREEK W.D.	PANTHER CREEK	600	NO	30	1,240	1,270
PHILOMATH	MARY'S RIVER	2,800	YES	2,050	90,890	92,940
PORTLAND BUREAU W.W.	BULL RUN RIVER	400,000	NO	90	27,480	27,570
ROSE LODGE WATER CO.	SLICK ROCK CREEK	240	YES	1,350	2,710	4,060
SALEM PUBLIC WORKS	NORTH SANTIAM RIVER	116,500	YES	20,300	294,030	314,330
SANDY	ALDER CREEK	4,000	YES	370	3,210	3,580
SCAPPOOSE-01	SOUTH SCAPPOOSE CREEK	3,300	YES	1,920	2,730	4,650
SCAPPOOSE-02	GOURLAY CREEK	3,300	YES	550	1,300	1,850
SCAPPOOSE-03	LAZY CREEK (EMERGENCY)	3,300	YES	340	290	630
SCOTTS MILLS W.D.-02	BUTTE CREEK	290	YES	3,120	25,450	28,570
SHERIDAN-0102	LA TOUTENA MARY / KEBINE SPRS.	2,200	NO	20	80	100
SHERIDAN-03	BALTIMORE CREEK	2,200	NO	140	200	340
SHERIDAN-04	SOUTH YAMHILL RIVER	2,200	YES	30,930	148,060	178,990
SILETZ-01	SILETZ RIVER	1,000	YES	13,520	118,190	131,710
SILETZ-02	TANGERMAN CREEK	1,000	YES	0	330	330
SILVERTON-01	ABIQUA CREEK	5,480	YES	1,840	29,840	31,680
SILVERTON-02	SILVER CREEK	5,480	YES	260	28,690	28,950
STAYTON	NORTH SANTIAM RIVER	4,785	YES	20,300	298,580	318,880
SWEET HOME	SOUTH SANTIAM RIVER	6,750	YES	31,370	335,760	367,130
TILLAMOOK	FAWCETT CREEK	5,000	NO	0	3,380	3,380
TOLEDO W.U.-01	SILETZ RIVER	3,200	YES	13,520	118,540	132,060
TOLEDO W.U.-02	MILL CREEK	3,200	YES	0	1,100	1,100
WALDPORT-03	ECKMAN CREEK	1,542	YES	290	2,920	3,210
WILLAMINA-01	WILLAMINA CREEK	1,760	YES	15,260	37,030	52,290
YAMHILL	TURNER CREEK	675	YES	1,120	1,870	2,990

SOURCES: WOODS; OREGON WATER RESOURCES DEPARTMENT

- Change current BLM water management guidelines to enlarge protection zones around individual use and community use water diversions.

Vegetation

Table 8 shows the acres of major plant groupings on BLM-administered lands in the planning area and the acres of seral stages (a series of plant communities which develop during ecological succession) in that grouping.

There are about 2,500 wetlands (primarily forest wetlands either permanently or seasonally wet) on BLM-administered lands in the planning area, totalling about 13,400 acres. These and other unique ecosystems are discussed as special habitat features (see Animals). Those sites reviewed for their potential as research natural areas (RNAs) and/or areas of critical environmental concern (ACECs) are discussed under special areas.

Noxious weeds found on BLM-administered lands in the planning area are tansy ragwort, scotch broom and Canadian thistle.

Table 9 shows federal candidate, state-listed, bureau sensitive and assessment species (all referred to as priority plant species) occurring on BLM-administered lands in the planning area. Since 1974, approximately 100,000 acres of the planning area have been inventoried for priority plants and habitats.

Current management provides for the following protection and mitigation for priority plants, unique ecosystems and wetlands and control of noxious weeds.

- All BLM activities must comply with the Endangered Species Act. Objectives are to recover federally-listed species and to protect other species to the extent needed to make their official listing unnecessary. An active inventory program to determine the locations of priority plant species, so impacts can be avoided, is

Table 8. Major Plant Groupings and Seral Stages (acres).

	Seral Stage					
Plant Group	Early (0-10)	Mid (20-40)	Late (50-90)	Mature (100-190)	Old Growth (200+)	Total
Douglas-fir/ Mixed Brush/ Salal	22,000	22,700	26,500	31,700	18,800	121,700
Douglas-fir/ Ocean Spray/ Herbs and Grasses	7,000	19,500	22,700	2,300	1,000	52,500
Douglas-fir/Red Alder/Vine Maple	24,700	31,600	20,500	10,300	3,500	90,600
Douglas-fir/Red Alder/Salmonberry	24,800	21,300	23,900	18,100	3,500	91,600
True Fir/ Rhododendron-Ceanothus/Beargrass	6,300	6,200	1,500	7,100	5,700	26,800
Sitka Spruce/ Salal/Deer Fern	3,400	1,900	3,100	1,700	0	10,100

Source: WOODS

Table 9. Priority plant species.

Species	Status	Category[2]
Federal List		
Aster gormanii	FC[1]	2
Erythronium elegans	FC	2
Sidalcea nelsoniana	FC	1
State Listed		
Sidalcea nelsoniana	—	Threatened
Bureau Sensitive		
Dodecatheon austrofrigidum	—	—
Poa laxiflora	—	—
Assessment Species		
Anemone oregana var. felix	—	—
Fritillaria camschatcensis	—	—
Poa Kelloggii	—	—
Diplophyllum plicatum	—	—
Lycopodium inundatum	—	—
Lycopodium selago	—	—
Cimicifuga elata	—	—
Filipendula occidentalis	—	—

[1]FC = Federal Candidate Species
[2]Category 1 - taxa with information to support proposing listing.
Category 2 - taxa with information to indicate listing is possibly appropriate.

linked to proposed locations of other activities such as timber sales. Baseline monitoring for federal candidate species was initiated in 1979 and is continuing today in order to determine their biological requirements and population dynamics. Monitoring to determine the effects of activities on species with high potential for federal listing is also occurring. Cooperation, coordination, and consultation with the U.S. Fish and Wildlife Service takes place when appropriate.

- RNAs and ACECs with special botanical resources are protected from incompatible uses.
- Wetlands are managed to protect their primary natural values.
- Noxious weed control activities are aimed at eliminating or reducing populations of tansy, scotch broom and Canadian thistle on BLM land. Control methods are selected as part of an integrated pest management program which provides for use of all available techniques (including herbicides where appropriate). All control is done as part of a coordinated program conducted by the Oregon Department of Agriculture.

Major opportunities to improve protection and mitigation include:

- Establish botanical protection areas, including habitats with concentrations of priority plant species which need special management consideration but do not qualify as ACECs (e.g., Klees Creek area - T. 5 S., R. 5 E., Sec. 4, 8, 9).
- Implement land exchanges to consolidate large populations of priority plants under BLM administration.
- Place structures in streams with degraded riparian ecosystems where restoration of the water table is expected to result.

Timber Resources

According to a 1989 regional timber inventory analysis completed by Oregon State University, there are 2,200 million cubic feet of standing timber volume on BLM-administered lands in northwest Oregon. This is approximately equivalent to 13,306 million board feet, Scribner short log scale (a board foot is a unit of solid wood, one foot square and one inch thick). By comparison, a similar inventory published in 1976 reported 2,722 million cubic feet, or 17,212 million board feet, Scribner. These figures are comprised of inventory data from three "timbersheds" and include a large portion of the BLM Eugene District, as well as Salem District, in the totals.

The age class distribution of Salem District timber for BLM inventories completed in 1980 and 1990 is shown in table 10.

The decline in acreage from 1980 to 1990 is attributable mostly to increased acreage designated fragile nonsuitable, designation of the Table Rock Wilderness, and transfer of lands to the Grand Ronde and Siletz Indian Tribes.

BLM regularly surveys harvested areas to determine the success of reforestation efforts. The current reforestation status for Salem District is shown in table 11.

Table 10. Comparison of Salem District Inventory Data 1980 and 1990

Age Class	Acres		Cubic Foot Volume (Thousands)		Board Foot Volume (Thousands)	
	1980	1990	1980	1990	1980	1990
0	19,800	9,100	0	0	0	0
1-5	19,800	13,500	0	0	0	0
10	30,800	32,600	0	388	0	0
20	22,900	29,400	0	18,213	0	91,778
30	42,200	26,900	119,955	53,788	722,551	282,927
40	30,800	36,000	119,759	158,115	733,657	862,701
50	13,800	24,000	67,675	165,580	421,525	932,890
60	8,800	20,700	50,829	172,183	318,037	997 552
70	13,100	9,800	86,652	78,656	546,371	466,323
80	16,100	7,900	124,878	77,215	785,372	468,298
90	27,100	8,600	233,661	80,307	1,481,402	493,834
100	25,300	19,000	226,873	225,512	1,433,870	1,416,857
110	7,900	14,400	74,433	158,883	475,040	984,757
120	9,600	7,800	99,780	91,532	643,071	575,183
130	8,400	6,500	93,160	70,058	598,964	444,109
140	3,000	1,800	30,135	22,935	192,775	146,509
150	1,900	2,500	22,414	32,428	145,703	207,539
160	0	300	0	4,445	0	28,275
170	500	100	7,585	2,022	50,061	13,035
180	0	0	0	0	0	0
190	1,700	0	26,374	0	172,894	0
200+	27,400	26,200	352,305	329,066	2,258,927	2,122,405
Totals	**330,900**	**297,100**	**1,736,468**	**1,741,327**	**10,960,240**	**10,534,974**

Source: District timber inventory records

Note: The 1990 acres shown in table 10 include only land to be included in calculations of the highest potential yearly allowable sale quantity (ASQ). These are lands now supporting or capable of supporting commercial conifer stands. Not included are non-forest acres, nonsuitable woodlands, hardwood stands, high-use recreation sites, and the Table Rock Wilderness.

Table 12 shows timber management and forest development average annual planned accomplishments for 10 years in the current plans for the planning area and average annual accomplishments through fiscal year 1989.

The volume of wood harvested from all ownerships in the 13 counties within the planning area averaged 3,748 million board feet, Scribner scale, per year from 1984 through 1989. Of that total, 1,327 million board feet (35.4 percent) came from national forest lands, and 393 million board feet (10.5 percent) from lands administered by BLM. This information is presented in terms of board feet because it is not currently available in cubic foot measure.

Components of the timber harvest program in the current plan are as follows:

- Final Harvest. Stands with a minimum age of 60 years were considered eligible for harvest in the plan projection, as a means of maintaining a high sustained yield harvest level. Most actual harvests have been in stands aged 80 years or more, but at times final harvest units include stands or portions of stands age 60 or somewhat less.

- Overstory Removal/Seed Tree Removal. In some areas, final harvest is carried out in two stages. During the first stage of harvest, some of the trees are left to provide shelter and/or a source of seed for the new generation of

Table 11. Reforestation Status as of October 1, 1988

	Age Class				
	0-5	6-15	16-25	26-35	Total Acres
Nonstocked	4,077	108	0	0	4,185
Understocked					
Unestablished	1,212	177	0	27	1,416
Established	4	468	441	9	922
Stocked					
Unestablished Min.	1,223	772	91	0	2,086
Unestablished Target	11,931	5,346	726	11	18,014
Established Min.	74	3,352	821	0	4,247
Established Target	1,485	20,961	2,732	159	25,337
Total Acres	**20,006**	**31,184**	**4,811**	**206**	**56,207**

Source: District forest resource inventory records (Micro*Storms)

Note: Relatively few acres are shown in the table for age classes 26-35. This is because survey data for most of these older reforestation units was never entered into the recently-developed Micro*Storms inventory data base.

Terms used in this table:

Nonstocked: Reforestation units with less than 10 percent stocking of commercial tree seedlings.

Understocked: Reforestation units with less than minimum stocking (approximately 150 trees per acre on site classes 2, 3, and 4).

Stocked: Reforestation units with at least minimum stocking.

Minimum stocking: at least 150 trees per acre on site classes 2, 3, and 4.

Target Stocking: at least 260 trees per acre (site class 3 and 4) or 320 trees per acre (site class 2).

Unestablished Stand: Reforestation units with trees still in danger of juvenile mortality, that may require additional treatments to maintain desired stocking levels.

Established Stand: Reforestation units with trees that are judged to be no longer in need of additional treatments to ensure survival.

seedlings. When these remaining overstory trees are later removed, that portion of the harvest is called an "overstory removal" or a "seed tree removal".

- Commercial Thinning. Stands aged 40 to 60 years are considered available for thinning when adequately stocked and located on suitable topography with good road access.

- Mortality Salvage. Incidental harvest of dead and dying trees from stands not currently scheduled for harvest comprises a small part of the total harvest quantity.

The TPCC inventory, which was completely revised in 1986-1987, is summarized in table 13. See end of appendix 3 for a portrayal of how the TPCC inventory subdivides the forest land base by site capability. The appendix also contains definitions of terms used in the TPCC. The suitable commercial forest land and suitable woodland catagories refer to lands that are capable of providing a sustained yield of timber. BLM-administered lands excluded from these two categories include non-forest areas (rock, water, roads, etc.), sites with severe fragile conditions, and congressionally-designated areas including the Table Rock Wilderness and Yaquina Head.

This table does not include approximately 6,000 acres in Table Rock Wilderness which was not

Table 12. Timber Management and Forest Development

Practice	Average Annual Planned for 10 Years (FY 1984-1993)	Average Annual Accomplished in 6 Years (FY 1984-1989)
Allowable Harvest		
Million Cubic Feet	38	34.9
Million Board Feet	245	229.3
Harvest (Ac.)		
Clearcutting	3,610	3,456
Commercial Thinning	520	46
Mortality Salvage	130	121
Shelterwood	90	55
Selective Cut	0	111
Site Preparation (Ac.)		
Broadcast Burning	2,960	2,847
Herbicide	700	0
Brush and Hardwood Conversion (Ac.)	140	78
Planting (Ac.)		
Normal Stock	2,650	3,317
Genetic Stock	2,460	204
Plantation Protection (Ac.)	1,450	1,002
Plantation Release (Ac.)	3,160	2,433
Precommercial Thinning (Ac.)	1,230	554
Fertilization (Ac.)	1,160	701

Source: 1983 records of decision (RODs) for the district timber management EISs; district annual monitoring reports.

inventoried for TPCC. Though they do not appear in the WODDB computation, a small number of acres are classified as Low Site or Non-Commercial Species.

Table 14 summarizes, for comparison, the TPCC classifications from the 1980 inventory.

There are some basic differences between the two TPCC inventories that make direct comparisons difficult. The most significant changes are summarized as follows:

- Adverse Location. The 1980 TPCC identified some sites considered difficult or impossible to manage for timber production because of physical isolation. Such lands are not identified in the new TPCC. They will be described in the RMP/EIS in an analysis of economic feasibility of management.

Table 13. TPCC Summary as of October 1, 1988

	Acres		
	O&C	PD	Total
Non-forest			
Rockland	2,800	400	3,200
Brush	200	0	200
Grass	300	100	400
Water	800	100	900
Highway	14,000	1,500	15,500
Utility	400	100	500
Agriculture	700	0	700
(Subtotal)	(19,200)	(2,200)	(21,000)
Non-Suitable Woodland			
Fragile Non-Suitable	28,200	7,200	35,400
Suitable Woodland			
Low Site	0	0	0
Non-Commercial Species	0	0	0
Non-Suitable CFL	10,100	1,600	11,700
Suitable Commercial Forest Land			
Non-Problem	43,300	1,200	44,500
Fragile Suitable	55,800	7,200	63,050
Reforestation Problem	112,700	18,200	130,900
Combination Reforestation and Fragile Problem	72,000	9,100	81,100
(Subtotal)	(283,780)	(35,740)	(319,520)
Total	341,300	46,700	388,000

Source: WOODS

- Restricted. In the older TPCC, restricted classifications were applied to problem sites for which (a) projected yields would be reduced or (b) special management practices would be necessary to prevent excessive site damage or to ensure adequate reforestation. "Restricted" is not used in the 1988 TPCC. Instead, such sites are considered suitable commercial forest and classified as fragile suitable or reforestation problem sites.

- Withdrawn. The 1980 TPCC included a withdrawn classification for sites with severe fragile conditions or reforestation problems. In the 1988 TPCC, land that is too fragile to support timber production is nonsuitable woodland, and sites with severe reforestation problems are called suitable woodland.

- Non-commercial forest. In the 1980 TPCC, hardwood stands were classed as noncommercial forest - withdrawn. In the 1988 version, hardwood stands are listed as suitable commercial forest with a reforestation problem if considered convertible to conifers and as suitable woodland if not convertible.

A key part of the planning process is estimation of the highest potential yearly timber sale volume (allowable sale quantity or ASQ). These ASQ

Table 14. TPCC Summary, 1990

	Acres
Non-Forest	
Rockland	5,200
Brush	800
Grass	900
Water	1,300
Roads	15,900
Utilities	800
(Subtotal)	(24,900)
Forest Land Excluded From Timber Production	
Fragile Withdrawn	20,600
Reforestation Withdrawn	4,700
Adverse Location	1,000
Low Site	600
Non-Commercial Species	800
(Subtotal)	(27,700)
Hardwood Forest Land	
Hardwood Convertible	21,000
Hardwood Non-Convertible	12,600
(Subtotal)	(33,600)
Commercial Conifer Forest Land	
Non-Problem	139,000
Fragile Restricted	82,700
Reforestation Restricted	95,900
(Subtotal)	(317,600)
Total 1990 TPCC Acres Salem District	**403,800**

Source: District inventory records

estimates for the four sustained yield units in the district are still being calculated. They will be available for review in early 1991. Copies of the analysis will be provided upon request to the district RMP team leader.

This harvest level will be the highest that can be sustained by BLM forest lands if maximum emphasis is given to timber production. It will be based on the TPCC inventory, the new timber inventory, and a set of assumptions about increased yields that would result from application of intensive timber management practices. In addition, potential harvest levels from some lands will be reduced to reflect management commitments and protection requirements for water quality and other resources.

This "benchmark" estimate will be useful for comparison with the allowable sale quantity which could be sustained under other alternatives in the plan. It will be based on the following assumptions:

- Adequate funding would be available for all reasonable practices.
- The district would emphasize use of timber management and regeneration systems that maximize timber production.
- The sizes of timber sale units would be designed to maximize efficiency of field operations and effectiveness of reforestation efforts.

- All available tools (including herbicides, consistent with BLM's Record of Decision for its Vegetation Management EIS) would be used for site preparation, seedling protection, plantation maintenance, and release from competition. On a site-specific basis, those tools would be used that are most effective in promoting seedling survival and growth.

- Lands would be reforested with adapatable commercial species as soon as feasible after harvest and site preparation. Genetically improved planting stock would be used in accordance with the Western Oregon Tree Improvement Plan.

- The Horning Tree Seed Orchard would be managed to produce increased supplies of improved seed, according to the schedule of orchard development contained in the Western Oregon Tree Improvement Plan.

- Root disease centers would be reforested with indigenous or adaptable disease-resistant tree species to reduce the incidence of the disease.

- Optimum spacing of seedlings and saplings would be achieved by means of initial plantation spacing or precommercial thinning in conjunction with the control of competing vegetation. The objective here is to maximize wood production by concentrating site resources in growth of merchantable trees.

- Commercial thinning of present and future stands would be practiced on those lands judged operable (i.e., with favorable topography) and where timber production gains are likely to result.

- Fertilizer would be applied to all present and future stands where increased wood yields are likely.

- Commercial forest sites suitable for conifers but presently occupied by grass, low-value hardwoods, or brush would be converted to conifers during the first several decades of the plan.

Economic efficiency analyses have been done for the following intensive management practices, using yield table data from the Clackamas-Molalla Sustained Yield Unit: precommercial thinning, commercial thinning, fertilization, and brush and hardwood conversion. Similar analyses will be completed in early 1991 for the other three master units on the district. Copies of the analyses will be provided upon request to the district RMP team leader.

The measure of economic efficiency is change in present net value (PNV). If the change in PNV from adding an intensive management practice is positive, it is considered economically efficient; that is, it adds more value than it costs. PNV is the sum of values of revenues less costs during the life of the stand. In this analysis, all values have been discounted to the time of harvest of the previous stand.

All analysis, including discount rates, was based on values net of inflation. This is called using real prices instead of nominal prices. The basis of expected timber stumpage prices is the average BLM timber sale price for the 1984-1988 period. For the primary analysis, future real wood price increases were estimated at 1.2 percent annually, based on the U.S. Forest Service's 1989 Resources Planning Act Assessment. A discount rate of 4 percent was used because it is considered to best represent the long-term outlook.

The Stand Projection System (SPS) was used to simulate growth and yield of the stands for analysis. Analyses of thinning and fertilization were made for both understocked and well-stocked stands, assuming final harvest ages of 60, 70, and 80 years. All practices considered relevant to each situation show a positive PNV except commercial thinning as a component of two management regimes considered for stands harvested at age 60.

For comparison and sensitivity testing, identical analyses were made using the following alternative assumptions: (1) zero real wood price increase and 4 percent discount rate; (2) 1.2 percent real wood price increase and 7 percent discount rate; (3) zero real wood price increase and 7 percent discount rate. Under the third assumption most practices show a negative PNV, while precommercial thinning and fertilization often show a negative PNV under the second assumption. Under the first assumption, all practices show positive PNV's when applied to well-stocked stands harvested at age 70, but exceptions occur where other circumstances apply.

Analysis of hardwood, brush, or grass conversion to conifers focused on estimating the maximum dollar amount which could be spent on the practice while achieving a positive PNV. The cost of conversion varies widely from site to site, but the stumpage value of any existing trees on a site can help to offset

those costs. Analysis indicates that most prospective stand conversion projects on good sites would be economically feasible.

For example, at 1.2 percent real wood price increase and with a 4 percent discount rate, up to $1,057 per acre could be spent for conversion on an average site if harvest at age 60 was expected (harvest ages of 60 to 70 are likely under the highest sustained yield scenario). The maximum amount economically feasible for any site declines as harvest age lengthens.

A number of comparative calculations of the allowable sale quantity (ASQ) will be made to test the effect of adding or subtracting various management practices or constraints. These planned but as yet uncompleted AMS "sensitivity analyses" are as follows:

- All Feasible Practices, Highest Sustainable Yield
- No Harvest Below Age of Culmination of Mean Annual Increment (CMAI)[1]
- No Harvest of Stands Smaller Than 12" Average Diameter
- No Harvest of Stands Smaller Than 16" Average Diameter
- No Harvest of Stands Smaller Than 20" Average Diameter
- No Harvest of Stands Smaller Than 24" Average Diameter
- No Fertilization, Thinning, or Site Conversion ("base program" only)
- No Harvest of Lands Considered Uneconomic to Harvest or Manage ("UEUF" lands)
- Departure from Nondeclining Harvest Level, No Harvest Below Age of CMAI

The analyses will be completed in early 1991, and copies may be obtained by request to the district RMP team leader. Sensitivity analyses for the preferred alternative will be provided in the draft RMP/EIS.

Demand for BLM timber is based primarily on a combination of three factors: (1) the characteristics of mills in the market area and their current short-term stocks of logs and purchased, unharvested timber; (2) western U.S. housing (including remodeling) activity; and (3) the level of exports of non-federal logs.

A recent report by researchers at the U.S. Forest Service Pacific Northwest Research Station indicates that the west side of Salem District is not expected to face a timber "supply gap" during the first two decades of the plan (1993 - 2012). A supply gap is generally defined as a decade when expected harvest levels from all lands fall below recent historic levels. On the other hand, the east side of the district is expected to have a deficiency of 40 MMCF of timber during the first decade and 60 MMCF in the second decade. These projections reflect the guidelines in place for management of the northern spotted owl in 1988. They do not forecast possible results of the subsequent listing of the owl as "threatened" by the U.S. Fish and Wildlife Service or of the Interagency Scientific Committee report.

Fuelwood sold by BLM in the planning area has averaged 1,925 cords annually for the last five years. Opportunities for increasing the availability of fuelwood for local use include managing designated areas for fuelwood harvest.

Animals

Each of the five seral stages (see Vegetation) provides important habitat for some wildlife species. The most important wildlife habitats on BLM-administered lands in the planning area include old-growth (200+ years) stands, streams, riparian zones, and other special habitat features (see table 15; old-growth forest acres in table 8).

The special nature of these habitats is based on several factors including rarity, regional significance

Table 15. Special Habitat Features

Habitat Type	Acres
Riparian	17,000
Permanent Wetland	5,800
Seasonal Wetland	7,600
Cliffs/Talus Slopes	5,500
Dry Meadows	4,400

Source: WOODS

[1]CMAI is the peak of average yearly growth in volume of a forest stand(total volume divided by age of stand).

for economically important species, importance to threatened and endangered species, or importance in adding diverse habitat elements to western Oregon forests.

The northern spotted owl is listed as a threatened species by the U.S. Fish and Wildlife Service and the State of Oregon. From 1985 through 1989, inventory and monitoring activities included an average of 44 sites visited per year (ranged from 35 to 61 dependent on year of survey) and covered 50 percent of the planning area. Spotted owl occupancy of BLM-administered lands averaged as follows:

- 23 sites with pairs (ranged from 14 to 38)
- 13 sites with single owls (ranged from 10 to 18)
- 8 sites unoccupied (ranged from 3 to 13)

Most of these owls nest and roost in mature and old-growth stands and forage in stands of various ages. On sites surveyed for reproductive status, the percent of sites producing young during the 1985-1989 period ranged from 48 to 87 percent.

Other federal threatened, endangered, candidate or proposed, or state-listed animal species inhabiting BLM-administered land in the planning area are:

- Bald eagle (federally listed as threatened in Oregon; listed as threatened by the State of Oregon): There are 3 known nesting pairs and 2 inactive nesting sites of bald eagles on BLM-administered lands in the planning area. Inventories of wintering bald eagles identified two feeding areas and a communal night roost.
- Peregrine falcon (federally listed as endangered): zero known eyries (nest sites). Occasional winter sightings are thought to be migrant birds.
- Marbled murrelet (federal candidate): 1 known nesting site and an increasing number of observations of birds flying over old-growth stands in the Coast Range.
- White-footed vole and Larch Mountain salamander (federal candidates): no inventories on BLM-administered lands in the planning area but they are assumed to exist there.

The Roosevelt elk population using BLM-administered lands in the planning area is estimated by Oregon Department of Fish and Wildlife (ODFW) to be about 1,000 in the Coast Range and about 150 in the Cascades. The quality and quantity of thermal cover appears to have decreased in recent years, due to extensive clear-cutting and road building. The highest numbers of elk in the Coast Range occur in the Nestucca River area, between Slick Rock and Warnick Creek, and just north of the Alsea River. In the Cascades, highest numbers of elk generally occur in Linn County. Spring populations of black-tailed deer in the planning area are estimated by ODFW to occur at densities of 17-30 deer per square mile in the Coast Range and 4-12 deer per square mile in the Cascades.

Dominant woodpeckers (downy, hairy and pileated woodpeckers, northern flicker and the red-breasted sapsucker) are cavity dwellers of high public interest. Based on forest stand condition information, there are an estimated 118,300 acres of suitable habitat (stands 80 years old or more which contain appropriate snags for foraging, roosting or reproduction) for these species on BLM-administered lands in the planning area. These areas of habitat support a population estimated at about 40 percent of potential.

Anadromous fish (e.g., coho and chinook salmon and steelhead) spawn in almost all of the major streams in the planning area. An estimated 164 miles of streams on BLM-administered land support coho runs, 61 miles support chinook runs, and 147 miles support steelhead runs. About 123 miles of streams support sea-run cutthroat trout and about 680 miles support resident trout. (These mileage estimates are based on 1980 inventory data. They will be updated in the RMP/EIS using WODDB). Cutthroat also inhabit 20 lakes and reservoirs on BLM-administered lands in the planning area. ODFW releases hatchery steelhead to supplement wild populations.

Wildlife populations can be affected by management activities that alter habitat, particularly timber harvesting, site preparation activities and road construction. To mitigate impacts on wildlife, the district has adopted the following requirements for resource management activities:

- A total of 390 acres are designated for bald eagle management and protected from timber harvest. An additional three sites have been located since 1981, and are also protected though they are undesignated.
- In accordance with a 1987 interim agreement with the ODFW, until completion of the new RMP, 24 spotted owl habitat sites are protected from activities which would render the sites unsuitable for continued occupancy. BLM

expanded interim management in fiscal years 1991 and 1992 by not planning any regular green timber sales in any of the habitat conservation areas recommended by the Interagency Scientific Committee.

- Timber management guidelines include provisions for limiting the size of clearcuts to 40 acres and spacing the harvest units to aid in providing desirable size and arrangement of forage areas for elk and deer.

- About 110 miles of BLM roads have been closed to general public use. These closures enhance use of habitat by elk.

- Salem District policy is to leave an average of 2 conifer snags and/or green wildlife trees per acre when lands are harvested to provide habitat for cavity nester species.

- Riparian zones are protected and provide habitat important to many species.

The following projects have been undertaken under current plans:

- Forage seeding of grass and legumes in selected clear cut units to improve habitat for elk.

- Fish habitat improvement projects, including barrier removal and construction of instream structures.

Major additional opportunities that can be considered to maintain or improve important habitats include the following:

- Fully implement the Interagency Scientific Committee's proposals for protection of the spotted owl.

- An option to the previous item would be to attain and/or maintain 60,000 acres of multi-canopied forest stands around 24 identified active spotted owl sites. Attain 43,000 acres on 43 potential owl habitat areas to provide for expansion of spotted owl habitat sites and to help prevent isolation of populations. Attain and/or maintain a total of 38,200 acres in smaller (approximately 80 acre) blocks to assist dispersal of spotted owls and help prevent isolation of populations.

- Manage about 700 acres of potential bald eagle habitat to help meet or exceed goals of the Pacific Bald Eagle Recovery Plan, including retention of large conifer trees.

- Maintain osprey nest trees and perch trees by avoiding disturbance in a 1/4-mile area around each nest tree during the breeding season (March 1 - Aug 31). Retain adequate nest and perch trees in habitat areas.

- Manage BLM-administered forest lands to maintain habitat conditions (e.g., forage/cover ratios and road densities) that are suitable for elk as recommended by the Oregon Department of Fish and Wildlife.

- Reduce public road access in elk habitat areas to 1.5 miles of road per square mile.

- Seed 20 percent of total area harvested in elk habitat to legume and/or grasses for elk forage.

- Expand coho and steelhead habitat by implementing stream enhancement projects and by providing passage over barriers in 5 identified locations.

- Implement land exchanges to acquire important elk habitat, spotted owl habitat and frontage on key coho and steelhead streams.

Cultural and Paleontological Resources

Any identifiable location of past human activity is a cultural resource, including archeological or historical sites, structures or traditional use places; the last category includes places of traditional cultural or religious importance to Native American groups.

Federal agencies are responsible for cultural resources on lands under their jurisdiction and for effects of their actions on cultural resources on non-agency lands. Through a group of laws beginning with the Antiquities Act (1906), BLM has been mandated to protect and manage such resources on lands it administers.

The planning area was first occupied by nomadic native peoples at least 11,000 years ago. The first historic occupancy, by transient fur trappers, began in the 1810s, with settlement following in the 1830s.

A Class I (existing data) cultural resource survey was completed for the district in 1980. Field surveys have been mainly linked to locations of surface-disturbing activities, particularly timber sales. Intensive surveys have been conducted on about 5,000

acres of BLM-administered land, and lower standard surveys on about 36,000 acres.

Fifty-eight prehistoric sites have been identified on BLM-administered lands. Four of these sites have been determined to be eligible for inclusion on the National Register of Historic Places.

Three-hundred and seventy-one (371) historic sites have been identified on BLM-administered lands. Of these, two-hundred and twenty-nine (229) are documented in historical records but have not been verified in the field. Three of these sites are listed on the National Register and one site is eligible for listing.

Yaquina Head and Table Rock have been identified by Native American groups as locales of traditional or religious uses.

BLM conducts surveys for cultural resources prior to authorizing surface disturbing activities and prior to approval of land disposal. Identified cultural resources are evaluated and protected as appropriate to the importance of the resource. Consultation with the State Historic Preservation Officer occurs when cultural resources are identified.

Six known and two potential invertebrate fossil sites have been identified on BLM-administered land in the planning area. If ground-disturbing activities are planned in or near these sites, they are evaluated and protected as appropriate.

Special Areas

Table 16 lists 22 areas on BLM-administered lands currently identified with specific labels for special management. The major labels include areas of critical environmental concern (ACEC), which are areas of BLM-administered land identified as needing special management attention; research natural areas (RNA), which are areas established and maintained for research and education; and outstanding natural areas (ONA), which are areas established and maintained for recreation in unique natural settings.

Twenty-two (22) areas have been identified by the public, BLM employees and other government agencies as possibly meeting the criteria for eligibility as an ACEC. The identified areas were screened by interdisciplinary teams composed of BLM managers and staff to determine whether their values met the ACEC criteria of "relevance" and "importance". The results of that review, as approved by the district manager, are displayed in table 17.

One area has been identified as having potential for management as a special area even though not eligible for ACEC designation (see table 18).

Existing and potential special areas except Dwyer Corridor are shown on map 5. The Dwyer Corridor is included within Wildwood Recreation Site.

Recreation

There are an estimated 2.9 million annual recreation visits to BLM-administered lands in the planning area (see table 20). Hunting, fishing, hiking, horseback riding, general sightseeing and driving recreation vehicles account for the majority of visits. Concentrated visitation occurs at 12 developed recreation sites on BLM-administered lands (see map 6). There are 28 miles of developed hiking/horseback trails and 2,145 miles of BLM-controlled access road open to motorized travel. Most vehicle use is limited to existing roads, as unroaded terrain and vegetation inhibit driving off-road.

Recreation use is concentrated in the following 10 locations: Alsea River/S. Fork Alsea River, Clackamas River, Green Peter Reservoir/Quartzville Creek, Marys Peak, Molalla River, Mt. Hood Loop Highway/Salmon River, Nestucca River, N. Santiam River/Little N. Santiam River, Sandy River, and Yaquina Head.

All BLM-administered lands fall into two recreation management classes - Special Recreation Management Areas (SRMAs) and Extensive Recreation Management Areas (ERMAs). Most of the lands are in the ERMA category. A small proportion of the lands are managed as SRMAs (areas where a commitment has been made to provide specific recreation opportunities), which include sites with major investments in recreation facilities to meet management objectives. Such objectives include providing recreation opportunities that would not otherwise be available to the public; reducing conflict among users; minimizing damage to resources; and reducing visitor health and safety problems. One potential SRMA is described in table 19 and displayed on map 6.

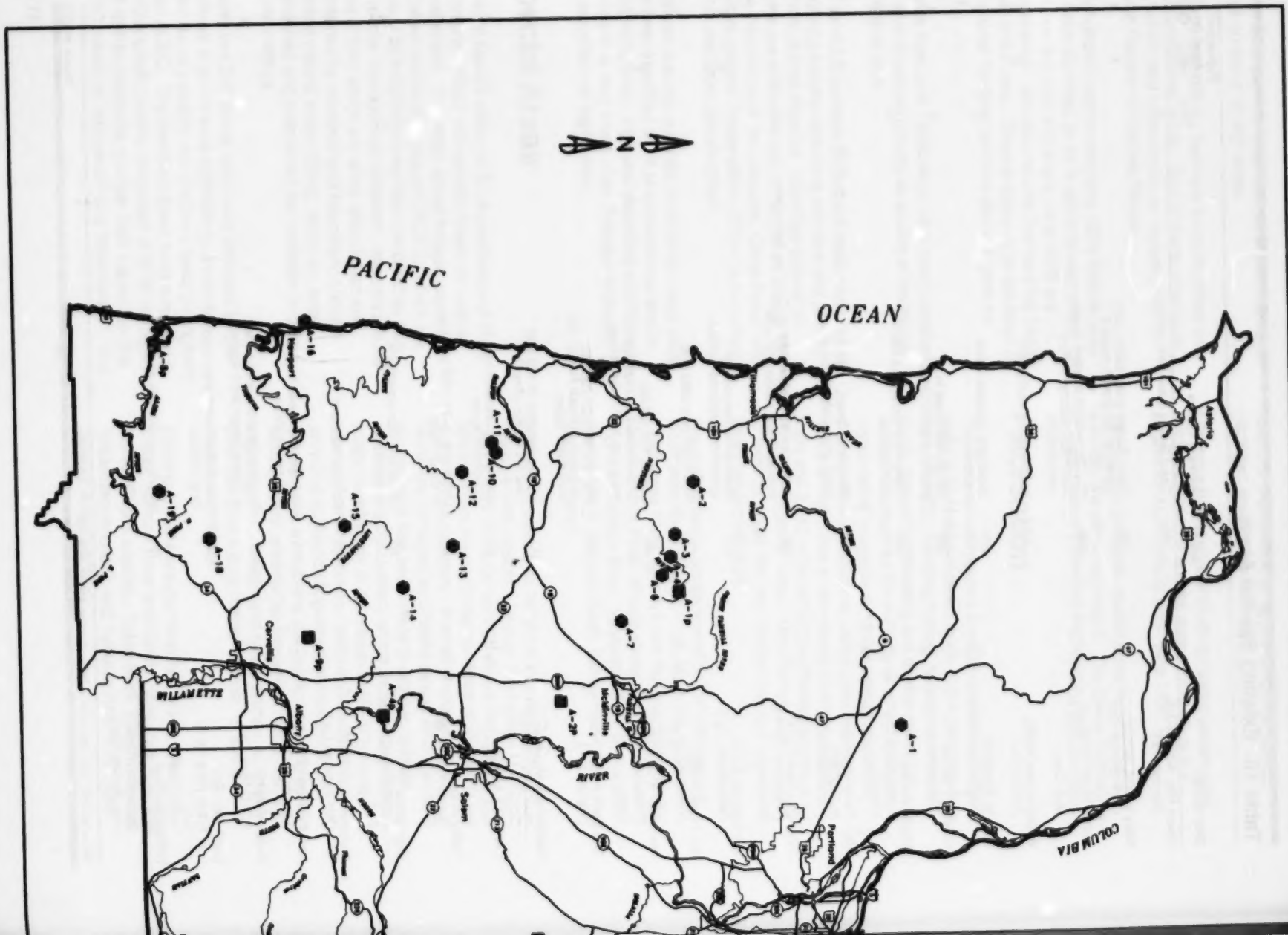
Existing SRMAs are the Nestucca River, Quartzville Creek, Salmon River and Sandy River (see Wild and Scenic Rivers section); Table Rock Wilderness (see Wilderness section); and Yaquina Head ONA (see Special Areas section).

Table 16. Existing Special Areas

Site Name	Acres	Primary Values	Protected/ Managed for:[1] Res.	Rec.	Other
Grass Mtn. ACEC/RNA (Benton Co.)	726	Coast Range grass bald complex	X		
Mary's Peak ACEC/ ONA (Benton Co.)	105	Coast Range grass balds, rock gardens, old-growth noble fir		X	X
Sandy River Gorge ACEC/ONA (Clack.-Mult. Cos.)	399	Roadless gorge on state scenic waterway; variety of plant communities		X	X
Williams Lake ACEC (Clack. Co.)	98	Lake and bog ecosystem		X	X
Soosap Meadows ACEC (Clack. Co.)	471	Subalpine meadow-forest mosaic	X		X
Carolyn's Crown ACEC/RNA (Linn Co.)	264	Old-growth forest in a glacier-created cirque	X		X
Middle Santiam Terrace ACEC (Linn Co.)	109	Old-growth forest on a major river terrace	X		X
High Peak-Moon Cr. ACEC/RNA (Tillamook Co.)	1,543	Old-growth forest, natural plant community associations	X		X
Sheridan Peak ACEC (Tillamook-Yamhill Cos.)	300	Habitat for weak bluegrass, a species being studied by BLM	X		
Big Canyon ACEC/ ONA (Wash. Co.)	269	Steep-sided canyon with specialized botanical habitats		X	X
Elk Creek ACEC (Tillamook Co.)	1,716	Bald eagle nest sites and habitat			X
Nestucca River ACEC (Tillamook-Yamhill Cos.)	5,138	Scenic, fish, wildlife, botanical and recreational values on 11.6 miles of river		X	X
The Butte ACEC/RNA (Yamhill Co.)	40	Diversity of micro-habitats at margin of Coast Range and Willamette Valley	X		X
Saddleback Mtn.ACEC/ RNA (Lincoln Co.)	151	Relict population of 400-600 year old Pacific silver fir	X		X
Little Sink ACEC/ RNA (Polk Co.)	81	Geologically unstable area in old-growth forest	X		X
Valley of the Giants ACEC/ONA (Polk Co.)	51	Old-growth forest (400 yrs. old) in Coast Range			X
Little Grass Mtn. ACEC/ONA (Lincoln Co.)	45	Grass/fern bald complex in Coast Range	X		X
Yaquina Head ACEC/ ONA (Lincoln Co.)	106	Coastal headland		X	X
Lost Prairie ACEC (Lincoln Co.)	61	High elevation peak bog with uncommon plants	X		X
Rickreall Ridge ACEC (Polk Co.)	176	Rocky ridge with a wide variety of Coast Range plant species			X
Larch Mtn. Env. Educ. Area (Mult. Co.)	183	Undisturbed forest area used by local schools			X
Willamette River Parcels (Columbia, Clackamas, Polk, Linn, Benton Cos.)	76	Islands and riverside parcels		X	

[1]Res. = research; Rec. = recreation; Other = education, natural values, etc.

Source: WOODB


N
PACIFIC
OCEAN
WILLAMETTE
RIVER
COLUMBIA
Corvallis
Albany
Salem
Portland
McMinnville
Newport
Astoria
A-1
A-2
A-3
A-4
A-5
A-6
A-7
A-8
A-9
A-10
A-11
A-12
A-13
A-14
A-15
A-16
A-17
A-18
A-19
A-20
A-21

Special Area Key

A-1 = Big Canyon
A-2 = High Rock - Moon Creek
A-3 = Elk Creek
A-4 = Nestucca River
A-5 = Sandy River
A-6 = Sheridan Peak
A-7 = The Butte
A-8 = Williams Lake
A-9 = Soosap Meadows
A-10 = Lost Prairie
A-11 = Saddleback Mountain
A-12 = Valley of the Giants
A-13 = Rickreall Ridge
A-14 = Little Sink
A-15 = Little Grass Mountain
A-16 = Yaquina Head
A-17 = Carolyn's Crown
A-18 = Mary's Peak
A-19 = Grass Mountain
A-20 = Middle Santiam Terrace
A-21 = Larch Mountain

A-1p = Walker Creek
A-2p = Yampo
A-3p = Wilhoit Springs
A-4p = Well's Island
A-5p = Shafer/Crabtree Creek
A-6p = White Rock Fen
A-7p = Yellowstone Creek
A-8p = Alsea Bay Island
A-9p = Forest Peak

LEGEND

- District Office
- Interstate Highway (5)
- U.S. Highway (199)
- State Highway (46)
- District Boundary
- Highway
- Stream
- Urban Area
- City
- A-5 Existing ACEC
- A-2p Proposed ACEC

SALEM DISTRICT
1990 AMS SUMMARY

MAP 5: SPECIAL AREAS

Table 17. Results of ACEC Identification and Screening Process

Site Name	Acres	Primary Values	Screening Results[1] Imp.	Rel.	Consider
Alsea Bay Island Potential ACEC (Lincoln Co.)	11	Low salt marsh in Alsea Bay	Y	Y	Y
Yampo (Eola Hills) Potential ACEC (Yamhill Co.)	13	Willamette Valley foothill native plant species.	Y	Y	Y
Walker Flat Sidalcea Potential ACEC (Yamhill Co.)	39	Population of Nelson's Checkermallow (Sidalcea) a rare plant specie	Y (360 acres do not meet criteria - dropped from consideration)	Y	Y
Wells Island Potential ACEC (Polk Co.)	67	Willamette River Island	Y	Y	Y
Wilhoit Springs Potential ACEC (Clackamas Co.)	149	Valley bottom conifer forest, historic resort site, fossils.	Y	Y	Y
Shafer/Crabtree Cr. Potential ACEC (Linn Co.)	966	Glaciation-phase plant ecol., old-growth forest (400-600 years old), lake and marsh	Y (700 acres do not meet criteria - dropped from consideration)	Y	Y
White Rock Fen Potential ACEC (Linn Co.)	51	Sphagnum bog and wetland complex	Y	Y	Y
Yellowstone Creek Potential ACEC (Linn Co.)	113	Numerous waterfalls and cascades in old growth; "A" quality scenery	Y	Y	Y
Forest Peak Potential ACEC (Benton Co.)	138	Valley margin forest; stream with 1st to 3rd order segments	Y	Y	Y
Parker Creek Candidate ACEC (Lincoln,Benton Cos.)	15	Falls and narrow bed rock gorge; high scenic appeal		(nomination withdrawn)	
Brightwood Bog Candidate ACEC (Clackamas Co.)	10	High elevation bog with cedar	N	Y	N
Table Mtn. Candidate ACEC (Lincoln Co.)	640	Diversity of plant species in area of wide geomorphic variety.	N	Y	N
Cape Lookout Candidate ACEC (Tillamook Co.)	40	Old-growth Sitka spruce-hemlock	Parcel transferred to Oregon State Parks		
Cedar Patch Candidate ACEC (Multnomah Co.)	40	Stand of almost pure western redcedar		(nomination not completed)	N
Down and Out Candidate ACEC (Yamhill Co.)	27+	Buffer to Sheridan Peak ACEC; contains weak blue-grass	N	Y	N
Grassy Overlook Candidate ACEC (Tillamook Co.)	32	Large and dense population of fringed pine-sap	N	Y	N

Table 17. Results of ACEC identification and Screening Process (continued)

Site Name	Acres	Primary Values	Screening Results[1] Imp.	Rel.	Consider
Siletz River Candidate ACEC (Lincoln Co.)	7	Old-growth Sitka spruce along upper tidal zone	N	N	N
Lost Creek Meadows Candidate ACEC (Clackamas Co.)	100	High mountain meadow		(nomination not completed)	N
Ringo Candidate ACEC (Clackamas Co.)	66	Mature western redcedar stand	N	N	N
Lukens Creek Candidate ACEC (Clackamas Co.)	500	Steep, north-facing slopes basalt outcrops and skeletal soils in 110 year old forest	N	N	N
Tally Creek Candidate ACEC (Linn Co.)	120	Mosaic of climax Douglas-fir communities with scattered old growth	N	N	N
Sleepy Hollow/ Marmot Candidate ACEC (Clackamas Co.)	640	Amphibian species habitats, scenic and historical values	N	N	N

[1] Imp. = importance criterion; Rel. = relevance criterion; Consider = consider for ACEC designation in the RMP; Y = yes; N = No.

BLM's pro-rata share of recreation demand increases anticipated for the planning area by the year 2000 is compared in table 20 to current estimated recreation activity on BLM-administered lands.

The following major opportunities have been identified for BLM to enhance recreation opportunities during the 1990s to help meet these demands:

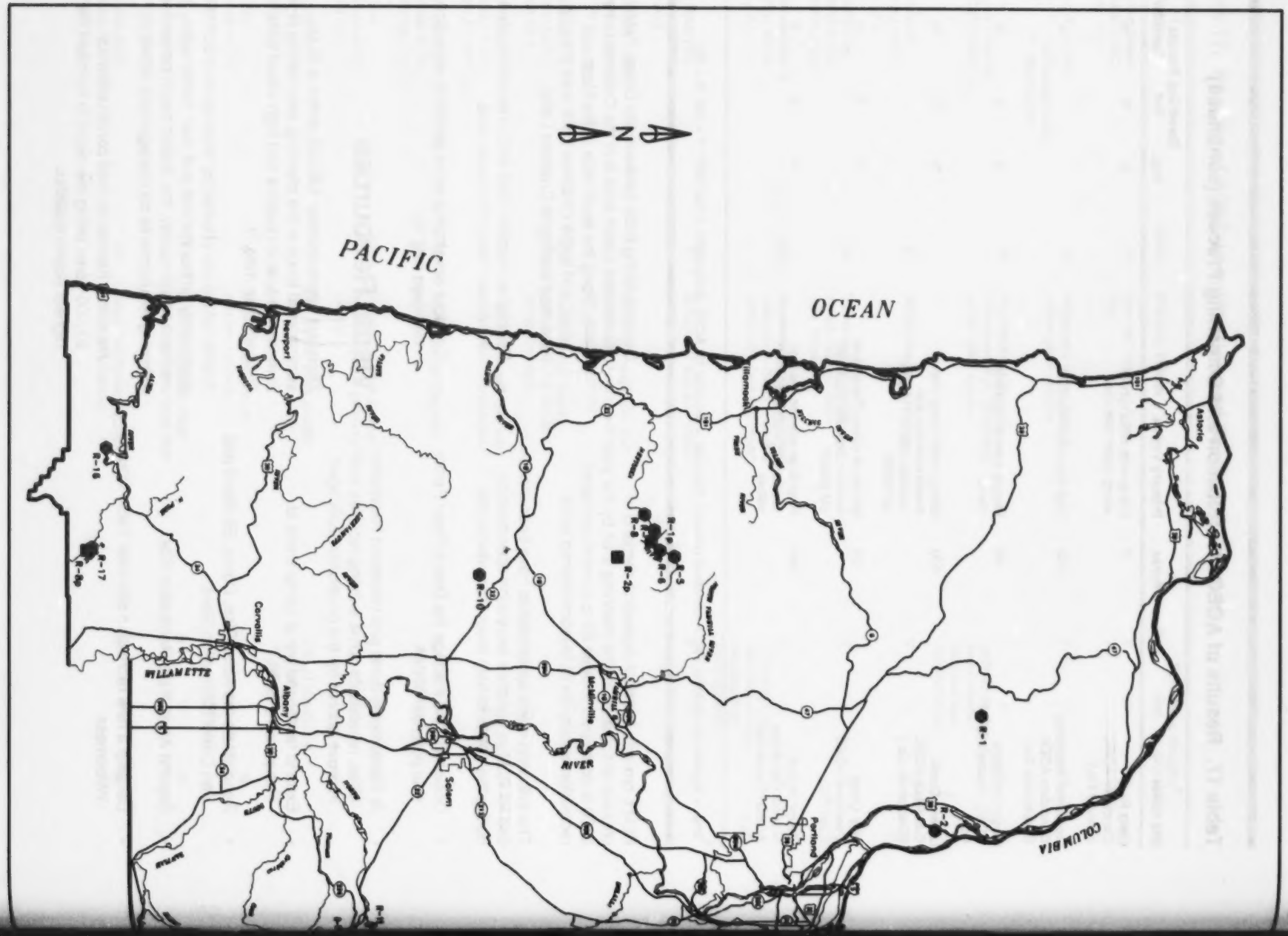
- Designate and manage the Green Peter Peninsula potential SRMA.
- At Fishermen's Bend and Wildwood Recreation Sites, rehabilitate some existing facilities and improve access for the physically challenged.
- Expand family and group camp areas at Fishermen's Bend.
- Rehabilitate the Alder Glen, Dovre, Elk Bend and Fan Creek Recreation Sites.
- Expand Alsea Falls Recreation Site.
- Develop a new recreation site near Table Rock Wilderness.
- Develop hiking trails between the Green Peter/ Quartzville Creek area and the Crabtree Lake area; along the south side of the Nestucca River; and in the Crabtree Lake area (closing the road leading to Crabtree Lake).
- Develop an access road and a recreation site in the Green Peter Peninsula area.
- Consider developing some potential recreation sites (see map 6).

Visual Resources

There are approximately 130,500 acres of BLM-administered lands in the planning area having high to moderate scenic qualities and high visual sensitivity levels (see map 7).

Scenic values are affected by management activities, particularly timber harvest and road construction. To maintain scenic quality, the district has imposed the following requirements on management activities:

- No timber harvest or road construction on 21,000 acres being managed to maintain the highest scenic qualities.


N
PACIFIC
OCEAN
WILLAMETTE
RIVER
COLUMBIA
Corvallis
Albany
Salem
McMinnville
Portland
Astoria

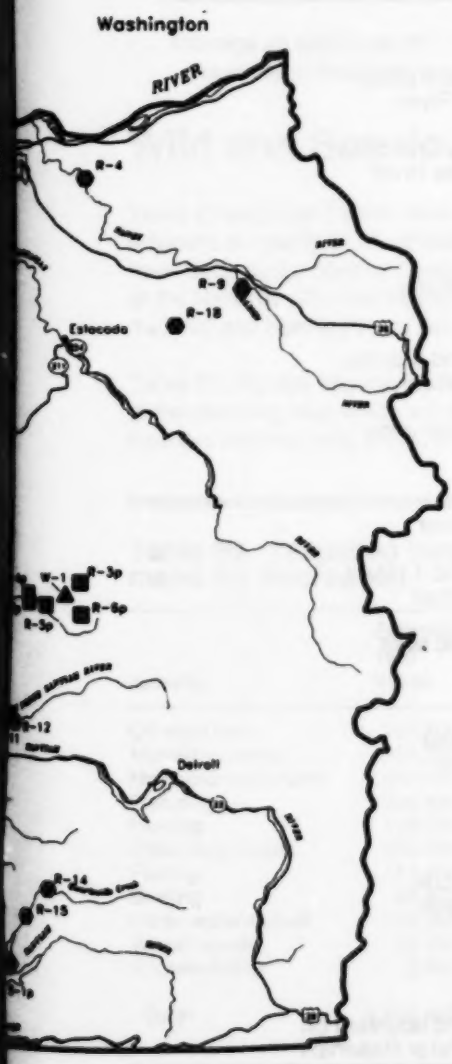
Recreation/Wilderness Key

R-1 = Scappoose County Park
R-2 = J.J. Collins Memorial Park
R-4 = Oxbow Park
R-5 = Dovre Rec. Site
R-6 = Fan Creek Rec. Site
R-7 = Elk Bend Rec. Site
R-8 = Alder Glen Rec. Site
R-9 = Wildwood Rec. Site
R-10 = Mill Creek Rec. Site
R-11 = Canyon Creek Rec. Site
R-12 = Elkhorn Valley Rec. Site
R-13 = Fishermans Bend Rec. Site
R-14 = Yellowbottom Rec. Site
R-15 = Dogwood Rec. Site
R-16 = Missouri Bend Rec. Site
R-17 = Alsea Falls
R-18 = Eagle Creek Trail Head
R-19 = North Fork County Park

R-1p = Nestucca River
R-2p = Willamina Creek
R-3p = Table Rock Trail Head
R-4p = Old Bridge Trail Head
R-5p = Rooster Rock Road Trail Head
R-6p = Pechuck Lookout Trail Head
R-7p = Molalla River Rec. Site
R-8p = Alsea Falls Expansion

W-1 = Table Rock Wilderness

S-1p = Green Peter Peninsula



LEGEND

- District Office
- Interstate Highway (5)
- U.S. Highway (199)
- State Highway (44)
- District Boundary
- Highway
- Stream
- Urban Area
- City
- R-5 — Existing Recreation Site/Area
- R-2p — Potential Recreation Site/Area
- W-1 — Wilderness Area
- S-1p — Potential Special Recreation Management Area

SALEM DISTRICT
1990 AMS SUMMARY

MAP 6: RECREATION SITES/AREAS AND WILDERNESS

Table 18. Potential Special Areas Other Than ACECs

Site Name	Acres	Primary Values	Potential Management
A. J. Dwyer Memorial Roadside Corridor (Clackamas Co.)	5+	Older forest along Mt. Hood Highway at Wildwood Recreation Site	Roadside Corridor Scenic Area

Source: District realty records.

Table 19. Existing Recreation Sites and Potential SRMAs

Name	Size (Acres)	Other Relevant Data
Existing Recreation Sites		
Alder Glen (Tillamook Co.)	2	Tent camping sites and 8 picnic sites on the Nestucca River
Alsea Falls (Benton Co.)	26	16 camp sites and 21 picnic sites on the South Fork Alsea River
Canyon Creek (Marion Co.)	5	21 picnic sites on the Little North Santiam River
Dogwood (Linn Co.)	12	5 picnic sites on Quartzville Creek
Dovre (Tillamook Co.)	4	3 tent camping sites and 3 picnic sites on the Nestucca River
Elk Bend (Tillamook Co.)	4	2 camp sites and 2 picnic sites on the Nestucca River
Elkhorn Valley (Marion Co.)	64	23 camp sites on the Little North Santiam River
Fan Creek (Tillamook Co.)	2	6 tent camping sites and 1 picnic site on the Nestucca River
Fishermen's Bend (Marion Co.)	141	37 camp sites, 12 picnic sites, boating, hiking on Santiam River
Missouri Bend (Benton Co.)	3	12 picnic sites and a boat ramp on the Alsea River
Wildwood (Clackamas Co.)	493	62 picnic sites on the Salmon River
Yellowbottom (Linn Co.)	15	22 camp sites and 6 picnic sites on Quartzville Creek
Potential SRMAs		
Green Peter Peninsula (Linn Co)	2,063	Undeveloped forest land bounded on three sides by Green Peter Reservoir

Source: WOODB

- On 16,000 acres being managed to maintain high to moderate scenic qualities, management objectives are being met by vegetative screening, partial cutting and minimal clearcutting.

- Minimizing clearcut areas exposed to view on 62,000 acres being managed to maintain moderate to low scenic qualities.

Major opportunities to further maintain or improve scenic quality include:

- Managing an additional 52,200 acres to maintain the highest scenic qualities.

- Managing and additional 41,300 acres to maintain high to moderate scenic qualities.

- Manage an additional 201,100 acres to maintain moderate to low scenic qualities.

Wild and Scenic Rivers

Table 21 and map 8 show river segments (with adjacent or nearby BLM-administered lands) which have been designated by Congress as components of the National Wild and Scenic Rivers System under the Wild and Scenic Rivers Act.

Table 22 displays information for 54 river segments in the planning area which were examined for possible national wild, scenic or recreational river designation. BLM determined eligibility by applying criteria established in U. S. Departments of the Interior and Agriculture guidelines. All of the segments listed in the table are free flowing except Rickreall Creek. Eight of the eligible rivers (12 segments) are listed in the Nationwide Rivers Inventory. Additional sources of information indicate that 24 segments of other rivers are eligible for possible national designation. The eligible segments are shown on map 8.

As shown in table 22, BLM found that 36 river segments meet the eligibility criteria for possible designation (free flowing and at least one outstandingly remarkable value). Seven of the river segments have more than 40 percent BLM-administered land within a 1/4-mile corridor and will be studied in the RMP process to determine their suitability for wild and scenic river designation. Other eligible river segments are located in areas where BLM-administered lands do not provide for substantial control and protection of outstandingly remarkable values. They are not considered appropriate for BLM-initiated study. The values on BLM-administered lands which help to make these excluded river segments eligible for study will be protected until a suitability study is completed by an appropriate agency. River segments found suitable in the final RMP will be addressed in a subsequent legislative environmental impact statement. Based on that statement, the Department of Interior will recommend to Congress which river segments should be designated.

Table 20. Projected Increases in Demand for Recreation

Activity	Estimated 1987 Visits	Projected Visits Year 2000
Off-road use	158,100	224,300
Motorized travel	801,200	1,197,000
Nonmotorized travel	444,600	657,100
Camping	305,400	440,400
Hunting	116,700	138,100
Other land-based	635,200	988,400
Fishing	183,700	242,100
Boating	50,300	67,000
Other water-based	149,200	209,200
Winter sports	56,700	72,100
Snowmobiling	5,300	5,600
Total	2,906,400	4,241,300

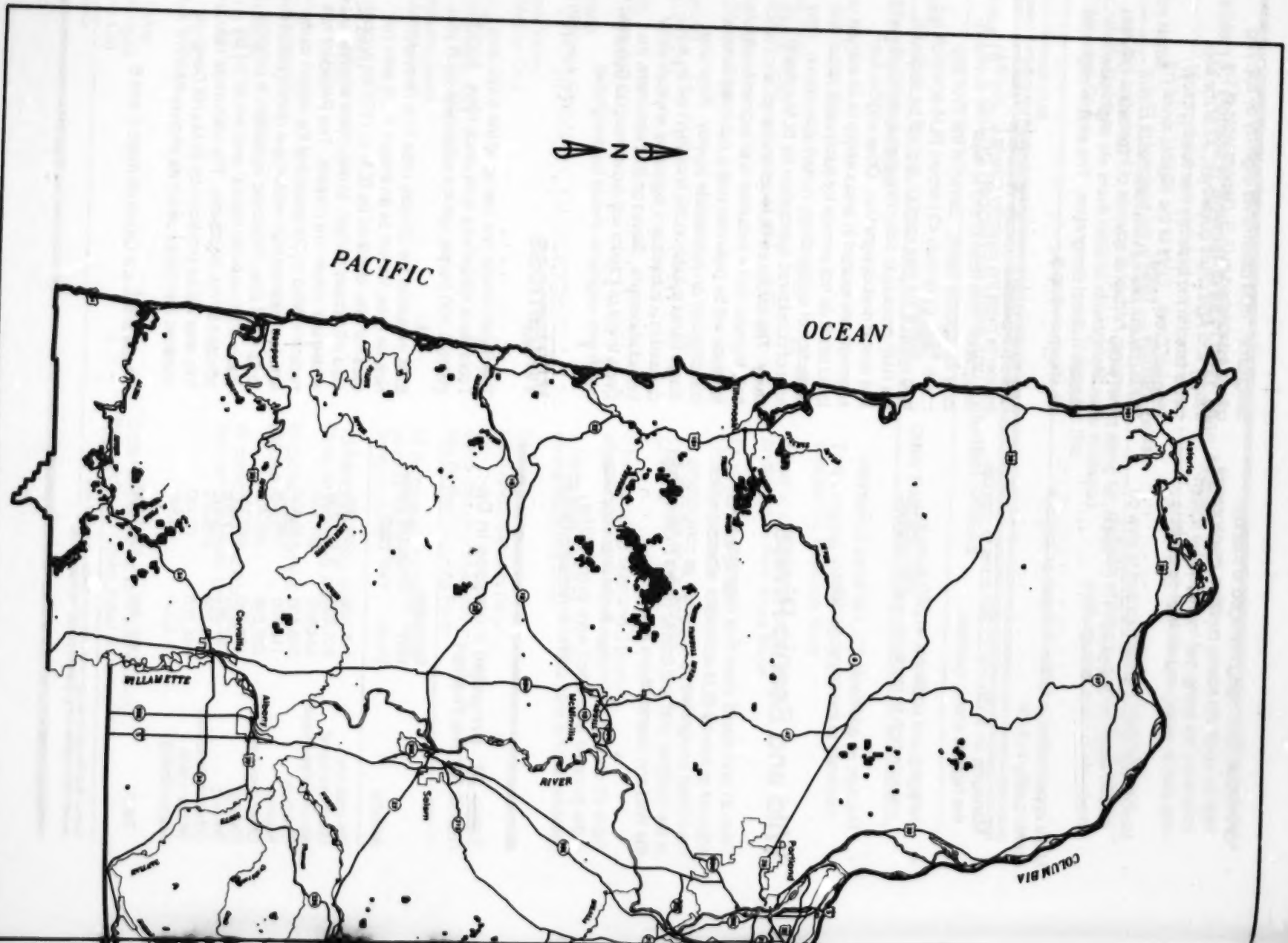
Source: BLM Recreation Management Information System; projected visits derived from Statewide Comprehensive Outdoor Recreation Plan.

Wilderness

The Salem District has managed the 6,020 acre Table Rock Wilderness Area since 1984. Approximately 1,500 people use the wilderness each year.

BLM evaluated the 81-acre Little Sink Research Natural Area, known as an instant study area (an area formally identified by BLM in 1975 for accelerated wilderness review), to determine whether wilderness values are present. The President has recommended to Congress that the instant study area be released from wilderness review status due to its small size. Proposed legislation is pending. Its status as a research natural area would not be affected by the legislation. The wilderness values in this area will be protected by BLM until Congress releases it or designates it as wilderness.

These areas are shown on maps 5 and 6.


PACIFIC
OCEAN
WILLAMETTE
RIVER
COLUMBIA

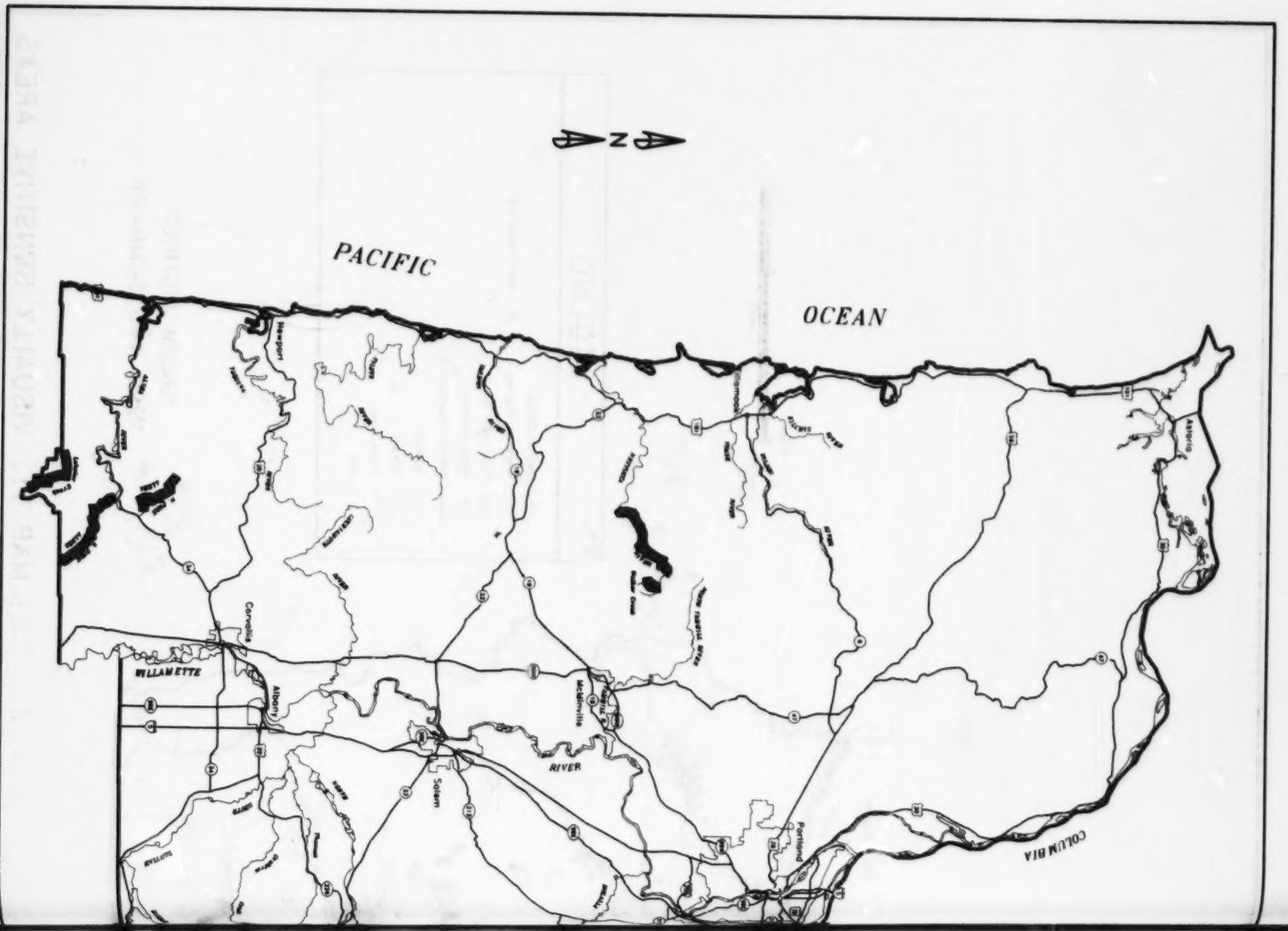
MILES

LEGEND

- District Office
- Interstate Highway
- U.S. Highway
- State Highway
- District Boundary
- Highway
- Stream
- Urban Area
- City
- Visually Sensitive Area

SALEM DISTRICT
1990 AMS SUMMARY

MAP 7: VISUALLY SENSITIVE AREAS


N
PACIFIC
OCEAN
Newport
Corvallis
WILLAMETTE
Albany
McMinnville
RIVER
Salem
Portland
COLUMBIA

LEGEND

- District Office
- Interstate Highway
- U.S. Highway
- State Highway
- District Boundary
- Highway
- Stream
- Urban Area
- City
- Wild, Scenic, and Recreational River – Designated Segment
- Wild, Scenic, and Recreational River – Study Segment

SALEM DISTRICT
1990 AMS SUMMARY

MAP 8: WILD, SCENIC, AND RECREATIONAL RIVERS

Table 21. Designated Wild, Scenic and Recreational Rivers

River Name	Total River Miles	BLM River Miles Classifications Wild	Scenic	Rec.	Current BLM Management
Clackamas River (Clackamas Co.)	47.0			14.5[1]	This river segment is administered by the Secretary of Agriculture. BLM will support the Forest Service's management planning effort upon request.
Quartzville Creek (Linn Co.)	12.0			12.0	A management plan for this special recreation management area will be completed by October 1992. Pending plan completion, river-related values will be protected through interim management.
Salmon River (Clackamas Co.)	33.5		4.8	3.2	A management plan for this special recreation management area will be completed by October 1992. Pending plan completion, river-related values will be protected through interim management.
Sandy River (Clackamas and Multnomah Cos.)	12.5		3.8	8.7	A management plan for this special recreation management area will be completed by October 1992. Pending plan completion, river-related values will be protected through interim management.

[1]The only lands under BLM jurisdiction are located in the last 1/2 mile of this segment near Big Cliff.

Source: District recreation inventory records.

Minerals

Since 1980, mineral activity on BLM-administered lands in the planning area has consisted primarily of gold exploration and aggregate production. Most locatable mineral activity has been small-scale placer mining with some underground exploration in old mines. During the early 1980's, there was some oil and gas exploration, but there is currently no activity. Also, there are no geothermal leasing or exploration activities at present. Almost all rock aggregate production has been used to build and maintain logging roads.

As of April 1990, there were 100 mining claims, no active mining notices of intent and no plans of operations on file. Oil and gas leases covered 9,100 acres. Annual production of rock averages 130,00 cubic yards. There are 95 active rock pits. The bureau administers the mineral estate on 27,800 acres of private surface ownership. Bureau policy is to encourage exploration and development of minerals using environmentally sound practices.

The potential for minerals on BLM land in the planning area is displayed in table 23.

Opportunities exist to revoke discretionary withdrawals and closures that restrict mineral development.

Table 22. Potential Wild, Scenic and Recreational Rivers

Eligibility Determinations and Proposals for Study

River Name	Segment Length (mi.)	Outstand. Remarkable Values[1]	Eligibility Determination/ Potential Classification[2]	Percent BLM Acres[3]	BLM-Initiated Study[4]
Abiqua Creek	15.0	None	Not Eligible/NA	NA	NA
Alsea River	17.0	R,F	Eligible/Recr.	7	No
Butte Creek	13.0	None	Not Eligible/NA	NA	NA
Clackamas River	12.0	R,F	Eligible/Recr.	1	No
Crabtree Creek Segment A	2.3	S,R,W,C,E	Eligible/Scenic	100	Yes
Crabtree Creek Segment B	4.2	None	Not Eligible/NA	NA	NA
Crabtree Creek Segment C	15.0	None	Not Eligible/NA	NA	NA
Drift Creek Segment A (Alsea RA)	12.0	F	Eligible/Recr.	2	No
Drift Creek Segment B (Alsea RA)	16.1	F	Eligible/Recr.	<1	No
Drift Creek (Yamhill RA)	4.7	None	Not Eligible/NA	NA	NA
Eagle Creek	12.0	None	Not Eligible/NA	NA	NA
East Fork Dairy Creek	20.0	None	Not Eligible/NA	NA	NA
East Fork Nehalem River	9.0	None	Not Eligible/NA	NA	NA
Elkhorn Creek	3.0	S,W	Eligible/Wild	83	Yes
Fall Creek	9.8	F	Eligible/Recr.	15	No
Kilchis River	11.5	R,F	Eligible/Recr.	2	No
Little Luckiamute River	25.0	E	Eligible/Recr.	<1	No

Table 22. Potential Wild, Scenic and Recreational Rivers (continued)

River Name	Segment Length (mi.)	Outstand. Remarkable Values[1]	Eligibility Determination/ Potential Classification[2]	Percent BLM Acres[3]	BLM-Initiated Study[4]
		Eligibility Determinations and Proposals for Study			
Little North Fork Wilson River	10.2	None	Not Eligible/NA	NA	NA
Little North Santiam River	24.0	S,R,F	Eligible/Recr.	16	No
Lobster Creek Segment A	4.7	F	Eligible/Recr.	100	Yes
Lobster Creek Segment B	15.6	F	Eligible/Recr.	3	No
Luckiamute River	52.0	C,E	Eligible/Recr.	<1	No
Lukens Creek	9.0	None	Not Eligible/NA	NA	NA
Middle Fork of the North Fork Trask River	5.0	None	Not Eligible/NA	NA	NA
Middle Santiam River	7.0	C,E	Eligible/Recr.	7	No
Mill Creek	22.0	None	Not Eligible/NA	NA	NA
Molalla River Segment A	11.0	None	Not Eligible/NA	NA	NA
Molalla River Segment B	13.0	S,R,G	Eligible/Recr.	6	No
Nehalem River	114.0	R,F	Eligible/Recr.	<1	No
Nestucca River	21.0	S,R,F	Eligible/Recr.	53	Yes
North Fork Alsea River	9.7	S,F,W	Eligible/Scenic	48	Yes
North Fork Clackamas River	12.0	F	Eligible/Scenic	8	No
North Fork Eagle Creek	4.5	None	Not Eligible/NA	NA	NA
North Fork Siletz River	9.0	F,W,E	Eligible/Scenic	36	No

Table 22. Potential Wild, Scenic and Recreational Rivers (continued)

River Name	Segment Length (mi.)	Outstand. Remarkable Values[1]	Eligibility Determination/ Potential Classification[2]	Percent BLM Acres[3]	BLM-Initiated Study[4]
	Eligibility Determinations and Proposals for Study				
North Fork Trask River	17.2	S,F	Eligible/Recr.	15	No
North Santiam River, Segment A	20.0	S,R,F	Eligible/Scenic	4	No
North Santiam River, Segment B	38.0	R,F	Eligible/Recr.	1	No
North Yamhill River	28.0	None	Not Eligible/NA	NA	NA
Rickreall Creek	28.0	None	Not Eligible/NA	NA	NA
Sandy River Segment A	12.6	R,F,C	Eligible/Recr.	9	No
Sandy River Segment B	11.6	S,R,F,C	Eligible/Recr.	1	No
Siletz River	68.0	S,R,F	Eligible/Recr.	<1	No
South Fork Alsea River	12.5	G	Eligible/Recr.	71	Yes
South Fork Trask River	11.0	F	Eligible/Recr.	2	No
South Scappoose Creek	15.0	None	Not Eligible/NA	NA	NA
South Yamhill River	50.0	C,E	Eligible/Recr.	<1	No
Table Rock Fork Molalla River	13.2	C	Eligible/Recr.	35	No
Thomas Creek	21.0	None	Not Eligible/NA	NA	NA
Trask River	16.4	R,F	Eligible/Recr.	1	No
Tualatin River	76.0	C	Eligible/Recr.	<1	No
Walker Creek	3.0	E	Eligible/Recr.	69	Yes
Willamette River	160.0	R,F,W,C,E	Eligible/Recr.	<1	No

Table 22. Potential Wild, Scenic and Recreational Rivers (continued)

River Name	Segment Length (mi.)	Outstand. Remarkable Values[1]	Eligibility Determination/ Potential Classification[2]	Percent BLM Acres[3]	BLM-Initiated Study[4]
			Eligibility Determinations and Proposals for Study		
Wilson River	26.6	R,F,W	Eligible/Recr.	2	No
Yaquina River	38.0	F	Eligible/Recr.	<1	No

[1]R = Recreation, F = Fish, S = Scenery, W = Wildlife, C = Cultural, E = Ecological, G = Geological.

[2]A river and its environs can be eligible for inclusion in the National Wild and Scenic Rivers System if it is a free-flowing river and possesses one or more outstandingly remarkable values. Potential classifications are Wild, Scenic and Recreational (Recr.). NA in this column means not applicable (since river is not eligible).

[3]Shoreline and adjacent lands within 1/4 mile of the river segment not to exceed 320 acres per mile measured from the ordinary high mark on both sides of the river. NA in this column means not applicable (since river is not eligible).

[4]Suitability study will be completed by BLM in the RMP. NA in this column means not applicable (since river is not eligible).

Source: District recreation inventory records.

Table 23. Mineral potential by management category

Management Category	Potential (acres of BLM land) Low	Moderate	High
Locatable Minerals	100	18,000	58,200
Oil and Gas	148,700	219,500	25,400
Geothermal Resources	389,100	4,500	0
Salable Minerals	387,600	5,000	1,000

Source: WODOB; district mineral inventory records.

Lands and Rights-of-Way

The BLM-administered lands in the planning area lie generally in a checkerboard pattern, intermingled with lands that are primarily privately owned. This ownership pattern complicates boundary identification and management.

The current plan identified 12,200 acres of land for transfer out of federal ownership. The primary purposes of this planned action are to sell extremely small, isolated parcels to other owners and to exchange larger, isolated parcels for private or government land adjacent to large blocks of BLM land. From 1964 through 1988, 3 acres were sold; 493 acres were transferred out of public ownership in exchange for 4,617 acres of other lands to be administered by BLM; and 57 acres were transferred under other, miscellaneous authorities. In addition, 9,800 acres have been transferred by Act of Congress to the Grand Ronde Indian Tribe. Land transferred out of BLM jurisdiction totals 10,353 acres.

Preliminary discussions have been held with several timber companies, and specific exchange proposals are being developed. Potential exchanges present opportunities to improve BLM's management efficiency.

There are several existing utility corridors crossing BLM-administered lands in the planning area. No proposals for additional corridors are known, but upgrading of existing facilities is likely.

There are eight developed hilltop or ridgetop communication sites on BLM-administered lands. Each site has access and utility service. Anticipated demand for additional microwave and radio communications sites is likely to lead to proposals to expand use of some sites, and some new sites on BLM-adminis-

tered lands are expected to be needed for communication facilities during the 1990s. Specific locations for new sites have not been identified.

BLM-administered land is used for a variety of purposes by other government agencies and private parties. Approximately 1,100 acres are used for county parks and other service facilities under Recreation and Public Purpose Act leases. Another 1,100 acres are used by federal agencies for air navigation, fish hatchery, lighthouse, electric power generation and other purposes. Numerous land use permits are issued to private parties for uses such as apiaries, campgrounds and filming of movies and commercials. Rights-of-way are issued for uses such as water lines, power lines and telephone lines.

Roads

The road system serving BLM-administered lands provides access for harvest of timber and other forest products, intensive forest management, recreation, mineral exploration and removal, and rural home sites.

There are 2,503 miles of BLM-controlled roads in the planning area (as of October 1988). Of these, 2,308 miles are surfaced (bituminous or gravel) for all-weather use. Preventive maintenance of the roads controlled by BLM occurs on a regular cycle; corrective maintenance occurs as problems are identified.

To support the current land use plan in FY 91 - FY 92, about 26 miles of new road would be constructed.

Under current district policy, about 110 miles of road are closed to public use year round to protect road surfaces and minimize erosion or to minimize disturbance to wildlife, particularly in important elk habitats. Another 110 miles are closed seasonally (winter and early spring) for the same purposes.

Access

In general, legal access is available to most BLM-administered lands in the planning area for BLM management activities (including timber removal) but only about half of the lands are legally accessible to the general public. Under current management direction, acquisition of an additional 110 road easements would be needed to support the future timber management program. Opportunities may exist to negotiate public access rights in conjunction with existing reciprocal right-of-way agreements that now permit only access for BLM administration and timber harvest.

Fire

Wildfires burned 6,065 acres of BLM-administered lands in the planning area from 1980 through 1989, mostly from fires caused by human use of forests. Current management direction is to control wildfires on or threatening BLM-administered lands at the least total combined cost of fire suppression, land rehabilitation and resource loss. Protection is provided through a contract with the Oregon Department of Forestry, which also provides fire protection on the intermingled (predominantly private) forest lands.

Prescribed (intentional) fires are used, primarily on sites recently logged, to reduce the hazard of wildfire and to prepare the sites for tree planting.
The acres burned by prescribed fire in recent years are shown in table 24.

Socioeconomic Conditions

The Salem District encompasses 12 counties which had a 1988 combined population of 1,745,300. The urban centers of Portland and Salem are located within the district. Baseline economic conditions in the area and estimates of BLM local economic contributions are summarized below.

Total wage and salary employment in the 12-county area averaged 724,486 from 1984 to 1988. Employment in the lumber and wood products sectors (including paper and allied products) averaged 27,348 or 3.8 percent of total employment. During the same baseline period, unemployment in the area averaged 6.9 percent and in the state 7.7 percent. Unemployment in the area is consistently slightly lower than the statewide rate. This can be attributed in large part to the economic centers of Portland and Salem.

Per capita personal income in the area averaged $14,158 from 1984 to 1988. This is slightly above the statewide average of $13,322 for the same period.

BLM's input-output model (BLMPACT) estimates that the average (1984-1988) timber harvest from BLM-managed lands in the district contributed an annual total 2,432 jobs and $52.44 million in personal income. In the same period, recreation use of BLM-administered lands generated an annual average

Table 24. Acres burned by prescribed fire

FY	Alsea	Yamhill	Tillamook	Clackamas	Santiam	District
1980	549	408	525	178	223	1,883
1981	422	251	325	367	467	1,832
1982	882	179	222	124	422	1,829
1983	545	443	390	287	468	2,133
1984	654	398	640	186	313	2,191
1985	442	444	663	689	346	2,584
1986	421	270	623	511	786	2,611
1987	774	760	919	410	432	3,295
1988	503	362	540	557	272	2,234
1989	1,334	835	1,187	758	586	4,700
Total	**6,526**	**4,350**	**6,034**	**4,067**	**4,315**	**25,292**
Ann. Ave.	653	435	603	407	432	2,529

Source: District fire management records.

320 jobs and $4.3 million in personal income. These estimates include direct jobs as well as jobs generated by respending. Other activities associated with BLM-administered resources can influence economic activity. An example would be downstream sport and commercial fishing. (An estimate of the economic contribution of these activities is planned for the RMP/EIS).

The O&C counties receive approximately half of BLM receipts from timber harvest on O&C lands in western Oregon. Each county receives a share based on the assessed value of O&C lands in the county in 1915. Table 25 shows the average (1984-1988) O&C payment to counties and the average (1984-1988) tax receipts.

The total 1988 payment made to local taxing districts in lieu of taxes on lands administered by the district was $161,083. Local governments also receive revenue from other management activities such as mineral leasing and development of BLM-administered lands.

The Regional Economic Development Strategies for some counties in the planning area promote tourism. BLM has identified several recreation management opportunities that could assist in this strategy (see management opportunities in the Recreation section).

Table 25: O&C and Tax Receipt Revenue by County

County	O&C Revenues	Tax Receipts
Benton	$2,144,459	$ 5,421,921
Clackamas	$4,150,740	$15,785,069
Columbia	$1,546,393	$1,555,590
Lincoln	$270,329	$4,583,813
Linn	$1,986,538	$3,180,264
Marion	$1,096,616	$11,665,985
Multnomah	$816,182	$58,309,468
Polk	$1,622,533	$1,409,609
Tillamook	$421,387	$1,617,535
Washington	$474,060	$19,155,542
Yamhill	$541,783	$3,275,600

Source: BLMPACT (input-output model)

Rural Interface Areas

County governments in the district have zoned some forest and adjacent lands for rural residential and other uses which, in some situations, are incompatible with intensive forest management activities. For purposes of this discussion, areas zoned for 1- to 20-acre minimum lots and certain other areas of residential use which include or adjoin BLM-administered land are referred to as rural interface areas. They are found throughout the lower elevations of the district. The amount of BLM-administered land within these identified areas is summarized in table 26.

In recent years, other land owners or managers in these interface areas have begun to express concerns about some BLM management activities. Often, conflicts can be resolved during project planning. When conflicts cannot be resolved, concerned parties may protest and appeal BLM actions, thereby resulting in more costly management for BLM.

Under the current management framework plans for the district, there are two special project planning guidelines which apply to rural interface areas: (1) protect domestic water diversions if necessary; and (2) minimize management impacts in visually sensitive areas where possible. A detailed resource inventory of these values is used to design projects.

Major opportunities to minimize conflicts in rural interface areas are:

- within sensitive rural interface areas, avoid using practices, such as herbicide spraying, slash burning and large clearcuts, which are objectionable to land owners;
- within rural interface areas of highly fragmented BLM-administered land, dispose of BLM-administered land.

Interrelationships with Other Agencies

Coordination of planning with other federal, state and local government agencies is required by BLM regulations (43 CFR Part 1610.3). Many formal coordination relationships between the BLM and these other government agencies or units have been established through memoranda of understanding (with Interior Department agencies) and interagency agreements (all discussed hereafter as agreements). A number of these have been approved by the director of the bureau and are sufficiently detailed to preclude the need for state office or district office level agreements. Some national level agreements have local supplemental agreements between lower level units of agencies. In addition, the state director has approved independent state level agreements, while the district manager has approved agreements with county governments. In general, these agreements deal with mechanisms for coordination, consultation and documenting consistency and therefore do not constrain resource allocations or management direction unless they are non-discretionary—that is, mandated by federal law, executive order or treaties. Some local agreements are very specific and involve techniques for managing public

Table 26. BLM acres in rural interface areas

Interface Areas (Zoning Categories[1])	BLM Acres Within 1/4-Mile[2]	BLM Acres Within 1/2-Mile[2]
Rural Residential - (1-5 acre minimum lots on private land)	3,500	9,600
Farm/Forest - (6-20 acre minimum lots on private land)	14,000	24,700

[1]Lot sizes existing or allowed to be created.
[2]These 1/4- and 1/2-mile areas will be used for analytical purposes in the RMP/EIS.

Source: WO008

lands to meet detailed objectives for plant and animal habitat, research projects, big game transplants or multi-purpose communication sites. Any agreement element which is discretionary can be modified as a consequence of the RMP decisionmaking process. Such agreements normally contain standard "escape clauses" that come into operation in the event of inadequate funding, discovery of contradiction with federal law, or the need to amend or revise the agreement due to newly approved plans, changes in resource condition, etc.

Relevant coordination occurs with the following agencies regarding the activities noted:

U.S. Forest Service - regarding plans, activities, and projects on adjacent lands.

U.S. Fish and Wildlife Service - regarding plans and activities that may affect a federal threatened, endangered, or proposed threatened or endangered species or its critical habitat, or a federal candidate species.

Bonneville Power Administration - regarding improvement of riparian zones and anadromous fish habitat as part of the Columbia Basin Fish and Wildlife Program of the Northwest Power Planning Council as authorized by the National Power Planning Act. Also regarding identification and evaluation of regional utility corridor options.

U.S. Army Corps of Engineers - regarding the Corps' authority, under the Clean Water Act, to regulate the discharge of dredged or fill materials into any estuary or wetland or stream with a flow in excess of five cubic feet per second.

National Marine Fisheries Service - regarding planning and activities which may affect marine, estuarine or anadromous fish resources.

Soil Conservation Service - regarding the National Cooperative Soil Survey.

National Park Service - regarding planning and activities that could affect an identified inventory or study river's ability to meet Wild and Scenic Rivers Act eligibility or classification criteria.

Oregon Dept. of Fish and Wildlife - regarding planning and activities affecting wildlife (including fish) habitat.

Oregon Dept. of Forestry (ODF) - regarding BLM compliance with the Oregon Forest Practices Act in the conduct of timber harvest, reforestation, road construction and maintenance, chemical applications, and slash disposal. Also regarding BLM compliance with the statewide Smoke Management Plan and Visibility Protection Plan under the umbrella of the Federal Clean Air Act. And regarding fire protection, for which ODF is BLM's primary contractor in the planning area.

Oregon Dept. of Environmental Quality - regarding BLM compliance with the Statewide Water Quality Management Plan, under the umbrella of Section 208 of the Federal Clean Water Act. Also regarding treatment and control of water pollution sources where such may be associated with BLM facilities.

Oregon Energy Facility Siting Council - regarding any proposed power plant larger than 25 megawatts, proposed electric transmission line over 230 KV in capacity or proposed natural gas line at least 16 inches in diameter.

Oregon Dept. of Agriculture - regarding noxious weed control programs and the state endangered plant species program. BLM coordinates site-specific noxious weed control activities with local weed control districts.

Division of State Lands - regarding BLM compliance with Oregon's Removal-Fill law, which regulates removing and filling of materials from and in the waters of the state.

Highway Division, Oregon Dept. of Transportation - regarding road planning in the vicinity of federal and state highways. Similar cooperation takes place with county road departments regarding county road systems.

Oregon Dept. of Parks and Recreation - regarding management of BLM-administered land adjacent to state parks and state scenic waterways.

Oregon Dept. of Geology and Mineral Industries - regarding mined-land reclamation on BLM-administered lands.

State Historic Preservation Office - regarding sites protected by National Historic Preservation Act regulations.

Land Conservation and Development Commission, through the Department of Land Conservation and Development - regarding consistency of BLM plans and activities with the Oregon Coastal Management Program, under the umbrella of the Federal Coastal Zone Management Act.

Counties - regarding consistency of BLM plans with acknowledged county comprehensive plans, as well as regarding a variety of BLM plans and activities that may affect county road systems, county parks and county natural resource management activities. BLM also participates in review of county planning actions in order to alert counties to potential conflicts and inconsistencies with BLM forest management plans or other plans.

The Confederated Tribes of the Siletz, Grande Ronde and Warm Springs Indians - regarding consultation as required by the Archeological Resources Protection Act and the Historic Preservation Act. Also regarding plans or activities that may affect tribal interests, treaty rights or traditional resource use areas.

Appendix 1

The Resource Management Planning Process

The Resource Management Plan (RMP) is a Land Use Plan as prescribed by the Federal Land Policy and Management Act of 1976. The RMP establishes in a written document:

- Land areas for limited, restrictive, or exclusive resource uses or fortransfer from BLM administration;
- Allowable resource uses and related levels of production or use to be maintained;
- Resource condition goals and objectives to be reached;
- Program constraints and general management practices;
- Identification of specific activity plans required;
- Support actions required to achieve the above;
- General implementation schedule; and
- Intervals and standards for monitoring the plan to determine its effectiveness.

The underlying goal of the RMP is to provide efficient on-the-ground management of public lands and associated resources.

The procedure for preparing an RMP involves nine interrelated actions as shown in Table 1-1. Some actions may occur simultaneously and it may be necessary to repeat an action if additional information becomes available. The plan that results from this process is a general decision document designed primarily to help district and area managers make decisions, and to guide the efforts of staff on a day to day basis. Where more detailed management direction is required, specific activity plans will be prepared after the RMP is completed.

Preparation of the RMP was initiated in the fall of 1986, with public involvement in the identification of preliminary planning issues and concerns. The first four steps of the RMP process have been completed, except for any modifications that may occur as a result of public review of this summary or the full AMS, located in the District Office.

Table 1-1. Resource Management Planning Process

Step	Completion Target
1. Identification of Issues	Completed
2. Development of Planning Criteria	Completed
3. Inventory Data and Information Collection	Completed
4. Analysis of Management Situation	Completed
5. Formulation of Alternatives	Early 1991
6. Estimation of Effects	Summer 1991
7. Selection of a Preferred Alternative	
a. Draft RMP/EIS	Summer 1991
b. Final RMP/EIS	1992
8. Selection of the Resource Management Plan	Late 1992
9. Monitoring and Evaluation	Start 1993

After the plan is implemented, it will be monitored and evaluated on a continuing basis to assure that land management issues are being addressed as expected and that it is accomplishing its intended results.

Public involvement and consultation with affected state and local governments is required at several points in the RMP process. This consultation is essential so the final resource management plan will be as consistent as possible with state and local natural-resource-related plans, programs and policies.

Appendix 2

Public Involvement in the Process So Far

Public involvement has been an integral part of BLM's resource management planning (RMP) process from the outset. To date public involvement activities have included a series of information mailers or brochures, public meetings, open houses, field trips, distribution of planning documents, document review and comment periods, informal contacts, group meetings, written letters and responses to comments. Our efforts began in May 1986 with a mailer that asked for comments on the type of public involvement activities that should be conducted in the planning process.

In September 1986, a district mailer outlined the overall planning schedule and requested comments on the first major planning step: Issue Identification. BLM invited the public to identify issues or concerns they believed should be addressed in the RMP process. A news release announcing this step was printed in local newspapers. During this planning step each western Oregon district hosted an open house to help acquaint local citizens with the planning process and schedule and to discuss issues related to the planning process. The open house in Salem was held on October 1, 1986, and 23 people attended.

Building on public comments received during the issue identification step, BLM prepared and distributed another district mailer in March 1987, summarizing publicly identified issues and concerns. The mailer also addressed the second and third planning steps: Development of Planning Criteria, including State Director Guidance, and Collection of Inventory Data. The mailer included a schedule of public meetings and/or field trips hosted by each district to review and discuss the technical elements of inventory collection, particularly forest inventory techniques. The mailer also disclosed a proposed element of planning criteria by identifying a proposed timber harvest computer model and an opportunity for public comment on the model. The district conducted a public open house and a field tour to discuss forest inventory techniques and BLM forest land classification procedures.

In August 1987 BLM distributed another mailer dealing with Planning Criteria and proposed State Director Guidance. This mailer requested comments on relevant topics for State Director Guidance and included a schedule for public demonstrations of the proposed TRIM-PLUS allowable timber harvest computer model. Demonstrations were conducted in Roseburg and Portland in September 1987. The demonstrations included a comparison of TRIM-PLUS and other harvest models and a discussion of how the TRIM-PLUS model works.

In May 1988 a draft State Director Guidance document was mailed to interested members of the public and to other agencies. The Salem District held an open house attended by 10 people on June 16, 1988, to discuss the State Director Guidance document. A comment period followed, with approximately 70 written responses sent to the state director by the end of August 1988. Proposed revisions to some elements of that guidance and responses to public comments were shared with the original respondents for further comment in several letters during 1989 and 1990.

Appendix 3

Guidance for Formulation of Alternatives

Introduction

The purpose of alternatives is to identify a range of reasonable combinations of resource uses and management practices that respond to planning issues and provide management direction for all resources. Five common alternatives will be addressed in each RMP, to provide a consistent set of distinct choices among potential management strategies.

A no change from the existing land use plan alternative will also be addressed. This is the "no action" alternative. In the other alternatives all existing land use decisions not found valid for continued implementation after 1990 (through an analysis summarized in the Analysis of the Management Situation), will be reconsidered.

Common alternatives that identify specific management actions along District boundaries will be consistent. Examples include elk management areas, spotted owl corridors or visual corridors.

This Guidance for Formulation of Alternatives may be modified later based on information identified in the districts' analyses of the management situation, or refinements that flow from the districts' site-specific development of common alternatives.

Goals and Objectives of the Common Alternatives

The purpose of the goal and objective statements for the five common alternatives (A through E) is to guide development of specific criteria. Each alternative, if implemented, is intended to achieve or meet its goal. Goal and objective statements focus on general direction of alternatives rather than technical points in issue-related criteria for the alternatives. In each alternative all resource management values would be accommodated to the extent consistent with the primary goals and objectives for that alternative.

Specific Guidance on Common Alternatives

The common alternatives would differ primarily in the way they allocate primary uses of lands (for example, lands allocated to intensive forest management, and lands allocated to protection of riparian zones).

The discussion on pages 60 through 72 describes criteria for addressing each of the eleven planning issues in the formulation of the common alternatives. It also describes how land use allocations and management actions would vary in response to each issue. Within the specific constraints provided by the guidance for addressing each issue, the districts have flexibility to formulate the common alternatives as they consider appropriate to meet the goals and objectives of each alternative.

	Alternative A	Alternative B
GOALS:	Emphasize high production of timber and other economically important values on all lands to contribute to community stability.	Emphasize timber production to contribute to community stability consistent with the variety of other land uses such as fish and wildlife habitat, recreation, and scenic resources on O&C and CBWR lands. Give equal consideration to all resource values on public domain lands.
OBJECTIVES:	• Produce the highest sustained yield of timber on all suitable forest lands legally available for harvest. • Contribute to ecological functions important to timber productivity and to habitat diversity to the extent possible consistent with the allocation for timber production. • Manage threatened and endangered species habitat as legally required. • Provide Research Natural Areas and eligible Areas of Critical Environmental Concern to the extent consistent with the allocation for timber production. • Manage appropriate Congressionally designated areas to maintain and enhance their scenic values. • Meet legal requirements for protection of wetlands and water quality, to protect anadromous fish habitat and other relevant values. • Emphasize substantial developed and dispersed motorized recreation uses. • Find no additional rivers suitable for designation under the Wild and Scenic Rivers Act. • Make land tenure adjustments which enhance BLM long-term sustained yield timber harvest opportunities. • Provide no special management in rural (residential) interface areas.	• Produce a high sustained yield of timber on O&C and CBWR lands, and on public domain lands where nontimber uses and values are of lesser importance than timber production. • Contribute to ecological functions important to timber productivity and to habitat diversity using a system that maintains old growth and mature forest in large and small blocks. • Protect habitat of all threatened and endangered species and species with high potential for listing. Protect habitat of other species of substantial concern to the extent consistent with high timber production. • Retain existing Research Natural Areas (RNAs) and Areas of Critical Environmental Concern (ACECs). Provide new ones from eligible areas to the extent consistent with the emphasis on timber production. • Manage scenic resources in selected areas of high recreation use. • Meet legal requirements for protection of wetlands and water quality and provide moderate additional protection for anadromous fish habitat, other substantial streams, and other water. • Provide for a wide range of developed and dispersed motorized recreation uses and opportunities, to minimize conflicts among recreation user groups. • Find eligible river segments suitable for designation as recreational, if they are important and manageable, and designation would not cause adverse economic impact. • Make land tenure adjustments which enhance BLM long-term sustained yield timber harvest opportunities on O&C and CBWR lands, and which benefit a variety of uses and values on public domain lands. • Adopt appropriate special forest management practices on BLM-administered lands intermingled with or adjacent to rural interface areas zoned for most dense residential occupancy.

Alternative C

Provide timber production to contribute to community stability consistent with maintenance of biological diversity and the variety of other uses such as fish and wildlife habitat, recreation, and scenic resources on all lands.

- Produce a moderate sustained yield of timber.
- Provide biological diversity using a system that maintains some old growth and mature forest, focusing on protection of areas where special status plant and animal species cluster.
- Protect habitat of all threatened and endangered species and species with high potential for listing. Protect habitat of other species of substantial concern through emphasis on biological diversity and to the extent consistent with moderate timber production.
- Retain existing RNAs and ACECs. Provide new ones from eligible areas except where lands managed by others are considered to provide more appropriate opportunities.
- Manage scenic resources in selected high use areas, particularly emphasizing protection in corridors of existing and proposed wild and scenic rivers and major trails.
- Provide substantial protection for anadromous fish habitat, other substantial streams and other water environments.
- Provide for a wide range of recreation opportunities emphasizing dispersed use, while reducing conflicts among recreational user groups.
- Find eligible river segments suitable for designation as scenic or recreational, if they are important and manageable, and designation would not cause adverse economic impact.
- Make land tenure adjustments to benefit a variety of uses and values.
- Adopt appropriate special forest management practices in rural interface areas zoned for moderate or high density residential occupancy.

Alternative D

Emphasize protection and reestablishment of spotted owl habitat, along with management and enhancement of other values such as dispersed nonmotorized recreation opportunities and scenic resources, while sustaining some timber production.

- Produce a sustained yield of timber consistent with allocations for other uses and values.
- Protect habitat of the spotted owl in accordance with the Owl Conservation Strategy.
- Protect habitat of all threatened and endangered species, species with high potential for listing, and species of related concern.
- Retain all existing RNAs and ACECs. Provide new ones from eligible areas except where lands managed by others are considered to provide more appropriate opportunities.
- Manage all identified scenic resources.
- Provide substantial protection for wetlands and riparian areas along most streams and other water.
- Emphasize dispersed nonmotorized recreation opportunities.
- Find eligible river segments suitable for designation as wild, scenic or recreational, if they are important and manageable.
- Make land tenure adjustments which would emphasize enhancement of nontimber uses and values.
- Adopt special timber harvest and forest management practices in rural interface areas zoned for moderate or high density residential occupancy.

Alternative E

Emphasize protection of older forests and management and enhancement of values such as dispersed nonmotorized recreation opportunities and scenic resources.

- Produce a sustained yield of timber consistent with allocations for other uses and values.
- Protect all old growth and older mature forests.
- Protect habitat of all threatened and endangered species, species with high potential for listing and species of related concern.
- Retain all existing RNAs and ACECs and designate all eligible areas.
- Manage all identified scenic resources and provide some visual resource protection for all lands.
- Manage all riparian areas and wetlands to maintain and improve water quality and fisheries habitat, and contribute to wildlife habitat diversity.
- Emphasize dispersed nonmotorized outdoor recreation opportunities.
- Find all eligible river segments suitable for designation as wild, scenic or recreational rivers.
- Make land tenure adjustments which would emphasize enhancement of nontimber uses and values.
- Adopt special timber harvest and forest management practices extensively buffering rural interface areas zoned for moderate or high density residential occupancy and other rural interface areas as appropriate.

	All Common Alternatives	Alternative A
Issue No. 1: Timber Production Practices: Which forest lands should be available for timber management, and what practices should be used on those lands?	**Guidance for All Common Alternatives: Lands allocated to intensive forest management under any of these alternatives would normally provide the highest nondeclining harvest level (even flow) of timber when the following conditions prevail:** • **Effective silvicultural techniques (such as clear cutting, shelterwood or partial cutting) appropriate to the land allocations are used.** • **All feasible site preparation and intensive management practices are applied.** • **Anticipated merchantability is the only constraint on minimum average stand diameter slated for future harvest. (In some areas this may result in harvest of timber stands as young as 40 years for several decades during the early to middle part of the next century under some alternatives.)** • **Adequate budgets are available to support the resultant timber sale program and allied intensive management practices, as well as scheduled monitoring linked to those activities.** **The common alternatives assume these practices and conditions on the lands allocated to intensive timber management, but incorporate less intensive management practices on other available forest lands to the extent needed to be consistent with the allocation of those lands.** **Where consistent with the goals and objectives of each alternative, the following silvicultural and harvest practices would be implemented on lands allocated primarily to timber management, to meet multiple land use objectives:** **Minimize regeneration delay by reforesting harvested sites as soon as practical. Calculate an empirical regeneration period based on representative stocking survey results, expected timber sale contract lengths and management objectives.** **Reforest harvested lands with indigenous commercial tree species. Emphasis would be placed on utilization of genetically improved stock in accordance with the Western Oregon Tree Improvement plan.** **Manage tree seed orchards to produce adequate supplies of genetically improved seed.** **Use available site preparation and seedling protection practices, including herbicides, using an integrated vegetation management approach. Emphasize those techniques that have proved most effective in assuring seedling survival and growth. (Actual practices will be based on site-specific analysis following completion of the RMP.)** **Convert to conifers those lands classified as commercial forest lands presently occupied by grass, hardwoods and brush.**	**Allocate all forest lands for timber production consistent with the management direction for other resources (Issue Nos. 2 and 3, etc.) in this alternative, except the following:** **Nonsuitable Woodland (See Figure 3-1 for Chart showing TPCC categories.)**

Alternative B	Alternative C	Alternative D	Alternative E
Allocate all forest lands for timber production consistent with the management direction for other resources in this alternative, except the following: Nonsuitable Woodland Suitable Woodland - Low Site	Allocate all forest lands for timber production consistent with the management direction for other resources, except the following: Nonsuitable Woodland Suitable Woodland - Low Site Suitable Woodland - Nonsuitable Commercial Forest Land	Allocate all forest lands for timber production consistent with the management direction for other resources, except the following: Nonsuitable Woodland Suitable Woodland - All Categories	Allocate all forest lands for timber production consistent with the management direction for other resources, except the following: Nonsuitable Woodland Suitable Woodland - All Categories The Fragile Gradient-Restricted component of the Fragile Suitable TPCC category Site Class V

	All Common Alternatives	Alternative A
Issue No. 1 (Continued)	Plan hardwood sites for management of a sustained yield of hardwoods, where consistent with allocations for other uses or values. Implement commercial thinning of present and future stands where practicable and where research indicates increased gains in timber production are likely. Practice initial spacing control of seedlings/ saplings through planting or thinning in conjunction with the control of competing vegetation, to maximize wood production by concentrating site resources in individual tree growth. Plan nitrogen fertilization applications for all present and future stands where research indicates increased wood yields would result. Plant specific root disease centers with resistant tree species. Consider uneven-age management in stands where this method would be economically feasible and would maintain environmental values. Consider efficiency of field operations and assurance of prompt reforestation in selecting the size of timber harvest units. Apply proper soil management measures to maintain soil productivity.	
Issue Nos. 2 and 3: Old-Growth Forests and Habitat Diversity To what extent and where should old-growth and/or mature forest habitats be retained, maintained or reestablished to meet various resource objectives? To what extent and where should BLM manage habitat to support populations of native wildlife species?	Any wildlife habitat management practice (such as nest boxes, road closures and forage seeding) not listed in the following could be implemented under any of the alternatives, as long as it is compatible with other management objectives. All special habitat features would be managed to protect their values. Mature and old-growth forests would be retained where Congressional designation of areas requires it. Snags and/or wildlife trees (to be converted to snags) would be retained where they occur on lands not allocated to timber harvest, except where public safety is a concern, and if left standing as nonmerchantable material on available forest lands. Where it would contribute to meeting wildlife tree objectives, create snags in areas not allocated primarily to timber production. A habitat goal of timber sale contracts would be to leave all snags and nonmerchantable trees that can be left consistent with safety considerations.	Mature and old-growth forests would be retained on most lands excluded from planned timber harvest by inclusion in the following allocations and TPCC categories: Nonsuitable Woodland Riparian Management Areas Existing high-use recreation sites T&E species recovery areas where timber harvest is prohibited Wilderness Areas

Alternative B	Alternative C	Alternative D	Alternative E
Contribute to habitat diversity using a system that protects mature and old-growth forest in large and small blocks. Mature and old-growth components of the forest would be distributed in a corridor system by seed zone and elevation. In the corridor system large blocks of approximately 640 acres would be connected by a series of small, stepping stone blocks of approximately 80 acres, spaced at about one-mile intervals. Blocks would be limited to defined corridor areas. Public Domain lands and the following allocations and TPCC categories on O&C and CBWR would receive priority for placement into the system, to the extent that they fit; for instance, if they provide needed habitat and are suitably located to contribute to the system. Nonsuitable Woodland Suitable Woodland - Low Site Riparian Management Areas Recreation Sites T&E species recovery areas where timber harvest is prohibited Special Areas (Natural Areas, ACECs) Wilderness Areas	This alternative would provide for intensive management of wildlife habitat and maintenance of biological diversity. It would strive to attain a balance of forest seral stages and associated plant and animal communities. Varying sized blocks of mature and old-growth forests would be spatially distributed over BLM-administered land, focusing on protection of identified areas where special status plants and animal species cluster. Where clustering is not apparent, alternative design would focus on seral stage balance and spatial distribution. The old-growth stands and other stands intended to attain old-growth status would be excluded from timber harvest except where other management is appropriate to benefit the special status species. Public Domain lands and the following allocations and TPCC categories on O&C and CBWR would receive priority for placement into the system, to the extent that they are suitably located: Nonsuitable Woodland Suitable Woodland - Low Site Suitable Woodland - Nonsuitable Commercial Forest Land	This alternative would manage habitats on BLM-administered lands to provide for a number and distribution of spotted owls that ensures continued existence of a well distributed population on those lands, so they may interact with spotted owls throughout the geographic range of the species, as recommended by the Conservation Strategy for the Northern Spotted Owl. Suitable wildlife trees would be retained to contribute to the maintenance of cavity-dweller populations on BLM-administered lands at 60 percent of the optimum population level. Wildlife tree and down log management practices would be used on the available forest lands, including but not limited to retention of green culls, snags and down logs. All special habitat features would be appropriately buffered.	This alternative would preserve the following: - all existing forest stands over 150 years old. - additional lands proximate to the above stands, to assist in maintaining natural ecological elements, protect the older stands from edge effect and natural disaster, and interconnect them into a sustainable network. - within two miles of each spotted owl nest or habitat core occupied by a pair of owls in the last three years, at least the acreage (where available) of suitable habitat considered to provide a high probability of continued occupancy by a pair of owls. In addition to retention of wildlife trees on lands not allocated to timber management, suitable wildlife trees would be retained to contribute to the maintenance of cavity-nester populations at 60 percent of the maximum potential population level on lands allocated

	All Common Alternatives	Alternative A
Issue Nos. 2 and 3 (Continued)		
Issue No. 4: Threatened and Endangered (and Other Special Status) Species Habitat What should BLM do to manage Federally listed threatened or endangered plants and animals and to prevent future Federal listing of plants and animals as threatened or endangered species?	Protect, monitor and manage habitats of Federal listed and proposed species in accordance with the Endangered Species Act and recovery plans, as legally required for self-sustaining survival.	Timber production constraints would be assumed in the formulation of the alternative only if critical habitat has been designated or there is a recovery or conservation plan within a month after completion of the Analysis of the Management Situation. Manage for the conservation of, and mitigate actions to protect habitats of, Federal Candidate, State Listed and Bureau Sensitive species where such actions would not diminish commercial use such as timber production.
Issue No. 5: Special Areas What areas on BLM-administered lands need special management to prevent irreparable damage to important historic, cultural or scenic values; to protect botanical or fish and wildlife resources or other natural systems or processes; and to protect life and safety from natural hazards? Which of these areas should be formally designated as Areas of Critical Environmental Concern (ACEC)?	Any areas considered appropriate for Research Natural Area (RNA) designation would also be considered appropriate for ACEC designation.	Designate potential ACECs that meet criteria only if the relevant values are not protected by other authorities (e.g., Wild River designation, the Endangered Species Act). Existing ACECs and potential ACECs that meet the preceding standard, including RNAs and proposed RNAs, would be retained or designated on nonforest lands or nonsuitable woodlands of no substantial mineral potential. Other existing ACECs and RNAs would be revoked.

Alternative B	Alternative C	Alternative D	Alternative E
Suitable wildlife trees and/or snags would be retained to contribute to the maintenance of cavity-dweller populations on BLM administered lands at 40 percent of the optimum population level. Wildlife tree management practices would be used on the available forest lands, including retention of green culls and snags.	Riparian Management Areas Recreation Sites T&E species recovery areas where timber harvest is prohibited Special Areas (Natural Areas, ACECs) Wilderness Areas Also incorporated would be a system of experimental habitat management areas (HMAs) established at strategic locations on BLM-administered lands, selected from proposed Category I and 2 HCAs in the scientific committee's Spotted Owl Conservation Strategy and other key spotted owl habitats. A habitat management plan prepared for each HMA would specify strategies for intensively managing the habitat for the long term existence of the spotted owl, including transplanting owls from one area to another, silvicultural practices to enhance habitat for owls and other appropriate measures. Suitable wildlife trees would be retained to contribute to the maintenance of cavity-dweller populations on BLM administered lands at 60 percent of the optimum population level. Wildlife tree and down log management practices would be used on the available forest lands, including but not limited to retention of green culls, snags and down logs. All special habitat features would be appropriately buffered.		to timber management. Wildlife tree and down log management practices would be used on the available forest lands, including but not limited to retention of green culls, snags and down logs. All special habitats would be appropriately buffered.
Same as Alternative A, except protect habitats of Federal Candidate, State Listed and Bureau Sensitive Species to the full extent on public domain land, and protect habitats of Federal Candidate (i.e., Category 1 and 2) species known only to occur on BLM-administered lands to the extent considered necessary to prevent their federal listing.	Same as Alternative B except for additional protection of special status species provided by criteria for Issues 2 and 3.	Manage all BLM-administered lands to support the conservation and protection of all Federal Candidate, State Listed, and Bureau Sensitive species and their habitats.	Same as Alternative D.
Retain all existing ACECs and RNAs. Designate potential ACECs that meet criteria only if the relevant values are not protected by other authorities. Do not allocate new RNAs on available O&C or CBWR land if a similar feature can be protected on a National Forest. Designate all potential ACECs (including RNAs) on Public Domain lands, nonforest lands, nonsuitable woodlands, and other lands allocated to nontimber uses.	Retain all existing ACECs and RNAs. Designate potential ACECs that meet criteria only if the relevant values are not protected by other authorities.	Retain all existing and designate all potential ACECs.	Same as Alternative D.

	All Common Alternatives	Alternative A
Issue No. 6: Visual Resources Which, if any, areas of BLM lands should be managed to reduce visual impacts or enhance visual (scenic) quality?	Note: Guidance for Issue 11 (Rural Interface Area Management) also addresses and defines visual resource management for Alternatives B, C, D and E in rural interface areas, except where this Issue 6 guidance sets a higher standard of visual resource management. Guidance for Issue 9A (Wild and Scenic Rivers) establishes criteria that will substantially dictate visual resource management by alternative in proposed wild and scenic river corridors. See Issue 9A and Issue 11 guidance for details.	Provide VRM Class I management within existing boundaries designated by Congress for exclusive management. Manage all other available (for timber harvest) forest land under VRM Class IV management objectives. Manage other lands as inventoried.
Issue Nos. 7 and 8: Stream/Riparian/Water Quality Where and how should riparian zones be managed to protect and improve water quality, fisheries and wildlife habitat? What actions should be undertaken to comply with state water quality standards? What should BLM do to manage for special needs such as municipal and domestic use?	Guidance for All Common Alternatives: Establish Riparian Management Areas (RMAs) on perennial streams (generally, 3rd order and larger streams), lakes, ponds and other waters, to meet Oregon Forest Practices Act requirements and Oregon water quality standards. Typical average widths of RMAs by alternative are displayed in Table 1. Within those RMAs no lands would be considered "available" (to offer timber for sale as part of the allowable sale quantity). Some timber harvest may occur, however, to achieve resource management objectives. These activities may include road construction and yarding corridors across streams and riparian zones to facilitate timber harvest outside the RMA. Logging, road building and site preparation methods would be designed to minimize the number and/or size of mass soil movements and to maintain the integrity of the RMAs. Other activities such as mining, recreation and ORV use would be regulated to protect water quality. Stream and riparian habitat improvement measures may be taken on any streams to improve water quality, fish habitat and/or wildlife habitat. Activities would be designed to meet Oregon Forest Practices Act (OFPA) requirements and Oregon water quality standards. Comply with written agreements with public water systems serving municipalities.	
Issue No. 9: Recreation Resources What areas or sites should be designed and/or managed to protect or enhance a variety of recreational opportunities?	Manage for dispersed recreation activities consistent with managed forest settings, including hunting, fishing, sightseeing, riding/hiking, and rafting. Maintain and manage existing recreation facilities which make available significant dispersed recreation opportunities, including recreation sites, boat ramps, trails, interpretive signs and related improvements. Manage existing Special Recreation Management Areas (SRMAs) and delineate Extensive Recreation Management Areas (ERMAs).	Manage existing high-use recreation sites and trails and expand them where needed. Close low use recreation sites and trails. Designate lands open to off-road vehicles (ORV) and leave roads open to motorized use, except where such designation would conflict with other allocations.

Alternative B	Alternative C	Alternative D	Alternative E
Provide VRM Class I management within existing boundaries designated by Congress for exclusive management. Manage as inventoried all available forest land adjacent to (within a quarter mile) developed recreation sites, state and federal highways, state scenic waterways, and rivers designated under the federal Wild and Scenic Rivers Act. Manage all other available forest land under VRM Class IV management objectives. Manage other lands as inventoried.	Same as Alternative B, except on available forest land where federal land ownership makes up more than half of a viewshed, manage lands as inventoried.	Manage all lands as inventoried.	Same as Alternative D, except manage as VRM Class III all BLM-administered lands inventoried as Class IV; and manage as VRM Class I BLM-administered lands adjacent to (within a quarter mile) developed recreation sites, state and federal highways, state scenic waterways and rivers designated under the federal Wild and Scenic Rivers act.

Table 3-1. Riparian Management Areas

Stream Order	Average RMA Width* (each side of the stream in feet) ALT. A	ALT. B	ALT. C	ALT. D	ALT. E
1					50
2				60	60
3	75	75	105	140	140
4	75	100	150	200	200
5	75	140	210	280	280
6	75	160	240	320	320
Lakes, Ponds & Other Waters	75	100	150	200	200

* Actual RMA widths would be determined by on-the-ground riparian vegetation, terrain and stream characteristics, but would be a minimum of 50 feet on all 3rd order and larger streams. First and second order streams would have RMAs designated if perennial or if the beneficial uses warrant.

Same as Alternative A, except support the State's Regional Economic Development Plan for the geographic area, retain options for new SRMAs and high value potential recreation sites and trails on Public Domain lands, maintain and/or improve all existing developed recreation sites, and consider reopening sites closed in recent years.	Allocate and manage new SRMAs. Continue management of all existing recreation sites and trails, and consider reopening sites closed in recent years. Emphasize wildlife viewing, interpretation and related old-growth forest recreation opportunities, both to attract nonlocal visitors and to serve local users. Retain options for future development of high value potential sites, trails and sightseeing opportunities. Impose additional ORV limitations or road closures to protect wildlife habitat or old-growth forest recreation opportunities, minimize conflicts with hikers and horseback riders, or meet other resource objectives.	Same as Alternative C, except manage for an optimum range of nonmotorized recreation. Retain options for future development of recreation sites and facilities for dispersed recreation opportunities. Retain existing pockets of old-growth forest that are both adjacent to and accessible from existing or potential recreation areas. Prohibit ORV and road use as appropriate to improve wildlife habitat or protect the ecosystem.	Same as Alternative D.

	All Common Alternatives	Alternative A
Issue No. 9A: Wild and Scenic Rivers **What, if any, rivers should be found suitable for designation?**	Provide interim protection for all river segments determined to be suitable, until Congressional action on BLM plan recommendations. Interim protection should be appropriate to the highest category for which the river is determined to be suitable. Manage Congressionally designated rivers consistent with their designation.	No rivers found suitable for designation under any classification.
Issue No. 10: Land Tenure **In what areas would BLM-administered lands be sold, exchanged or transferred out of federal ownership under other authorities to improve management efficiency and benefit resource program objectives? In what areas would BLM attempt to acquire lands to improve management efficiency and benefit resource program objectives?**	A major lands program effort would use exchanges to consolidate land ownership patterns to benefit one or more of the resources managed, such as timber, watershed, wildlife habitat, recreation, cultural, botanical, and minerals. Land tenure adjustment would be guided by a three-zone concept utilizing the following standards: Zone 1 includes areas currently identified as having high public resource values, and other efficiently managed lands. The natural resource values may require protection by federal law, Executive Order or policy. These lands may have other values or natural systems which merit long term public ownership. They do not meet the criteria for sale under FLPMA Section 203(a) and would generally be retained in public ownership. The Zone 1 boundaries should be relatively close to or on BLM property lines except where the intent is to show preferred acquisition areas. Zone 2 includes lands that are suitable for exchange because they form discontinuous ownership patterns, are less efficient to manage than Zone 1 lands, and may not be accessible to the general public. Where appropriate opportunities are identified, these BLM-administered lands may be exchanged for other lands in Zones 1 or 2, transferred to other public agencies, or given some form of cooperative management. These lands would not be expected to meet the criteria for sale under Section 203(a), and would not be identified as suitable for such sale. Zone 3 includes lands that are scattered and isolated with no known unique natural resource values. Zone 3 lands are available for use in exchanges for private inholdings in Zone 1 (high priority) or Zone 2 (moderate priority). They are also potentially suitable for disposal through sale	Exchanges would be made to acquire lands which would enhance the nondeclining harvest level of the commercial forest land managed by BLM, by improving age class distribution or other harvest level determination factors. Factors to consider include site quality, access to public forest land, logical logging units, and management of public forest land to facilitate timber harvest. No exchanges would be made to acquire lands more valuable for nontimber uses. No commercial timberland would be sold or leased. Leases or conveyance of land in Zones 2 and 3 other than commercial timberland would be made under the Recreation and Public Purposes Act to provide appropriate facilities or services.

Alternative B	Alternative C	Alternative D	Alternative E
No rivers found suitable for designation as wild or scenic. River segments eligible for wild, scenic or recreational classification found suitable for designation as recreational, if all of the following circumstances exist: - no net adverse economic impacts on the local economy. - river segment possesses at least one outstandingly remarkable value for which it is considered by BLM to be the top river in the State Comprehensive Outdoor Recreation Plan (SCORP) region. - BLM can effectively manage the outstanding values of the river segment.	River segments eligible for scenic or recreational river status found suitable for designation consistent with their highest potential classification, and river segments eligible for wild classification found suitable for designation as scenic, if all of the following circumstances exist. If only the economic impact test is not met, find suitable for designation as recreational. - no net adverse impacts on the local economy. - river segment possesses at least one outstandingly remarkable value for which it is considered by BLM to be among the top two rivers in the SCORP region. - BLM can effectively manage the outstanding values of the river segment.	Eligible river segments found suitable for designation consistent with their highest potential classification if the following circumstances exist. - river segment possesses at least one outstandingly remarkable value for which it is considered by BLM to be among the top four rivers in the SCORP region. - BLM can effectively manage the outstanding values of the river segment.	All eligible river segments found suitable for designation consistent with their highest potential classification.
Exchanges of O&C and CBWR lands would be made primarily to acquire lands which would enhance timber management opportunities. Exchanges of public domain lands would be made to benefit one or more of the resources managed, including nontimber values. Sale of O&C and CBWR lands other than available commercial forest lands, and of public domain lands, would be made to dispose of lands that meet any of the criteria of FLPMA Section 203(a). Leases on such lands would be made to accommodate other uses. Leases or conveyances under the Recreation and Public Purposes Act would be made in Zones 2 and 3 to provide appropriate facilities or services.	Same as Alternative B, except emphasis would also be given to exchanges of O&C and CBWR lands that would contribute to conservation of biological diversity.	Land exchanges would be made to benefit one or more of the resources managed. Exchanges involving disposal of timber to acquire lands containing greater nontimber values would be emphasized. Sales of lands other than available commercial forest lands would be made to dispose of lands that meet criteria (1) or (2) of FLPMA Section 203(a), but sales of land that meet only criterion (3) would not be made. No lands would be leased, except leases and conveyances under the Recreation and Public Purposes Act would be made in Zones 2 and 3 to provide facilities or services for the benefit of the public.	Same as Alternative D.

	All Common Alternatives	Alternative A
Issue No 10. (Continued).	under FLPMA Section 203(a) if important recreation, wildlife, watershed, threatened or endangered species habitat, and/or cultural values are not identified during disposal clearance reviews and no viable exchange proposals for them can be identified. The discussion of Zone 3 lands must state which of the disposal criteria in FLPMA, Section 203(a), apply. Zone 3 lands would also be available for transfer to another agency or to local governments, as needed to accommodate community expansion and other public purposes.	
Issue No. 11: Rural Interface Area Management Which BLM-administered lands should be allocated to receive special management practices due to the concerns of residents who live in close proximity? (Rural interface areas are areas where BLM-administered lands are adjacent to or intermingled with privately owned lands where county zoning has created or allows for creation of lots as small as 1 to 20 acres. In most rural interface areas concerns of the residents are related to forest management practices, visual quality and potential affects on domestic water sources and water supplies.)		No special management actions except those that address other issues.

Sensitivity Analyses

Sensitivity analysis is a process of examining specific trade-offs which would result from making changes in single sensitive elements of an alternative. Such analyses will be particularly helpful in developing the preferred alternative, to make it most effective in reconciling potential conflicts and optimizing overall benefits. The sensitivity analyses will have the further benefit of informing the public about certain trade-offs, which should facilitate their offering information preferences in their comments on the Draft RMP/EIS.

Sensitivity Analyses of Land Use Allocations

Some specific land-use allocations and other decision elements will be subjected to sensitivity analysis at the same time as preliminary analysis of impacts of the initial array of plan alternatives and prior to selection of a preferred alternative. This analysis will identify approximate opportunity costs associated with differing approaches to the most sensitive land use allocations and decision elements.

Because of the number of land use allocation issues and alternatives, sensitivity analysis must be tightly focused to be manageable. The analysis, therefore, will focus on mid-range alternatives. At a minimum, the following will be analyzed for Alternatives B, C and D and the preferred alternative:

- Effects on timber harvest (ASQ) and related jobs and county revenues, and on cavity dwellers, of substituting the next higher and next lower alternative levels of snag

Alternative B	Alternative C	Alternative D	Alternative E
On BLM-administered lands within one quarter mile of private lands in identified rural interface areas zoned for 1 to 5-acre lots, customary forest management practices would be altered, where realistically feasible, to mitigate the adjacent neighbors' concerns (i.e., management would look for alternative methods of practicing intensive forest management). Examples of management options include harvest regimes other than clearcutting, hand application rather than aerial application of herbicides and pesticides, inclusion of additional buffers for domestic water sources, and hand piling slash for burning as opposed to broadcast burning. All BLM-administered lands within a quarter mile of designated rural interface areas 1 to 5-acre lots) would be managed for VRM class III objectives.	Same as Alternative B except that lands zoned for 1 to 20-acre lots would also be included as the rural interface area.	On BLM-administered lands within one quarter mile of private lands in rural interface areas zoned for 1 to 20-acre lots, there would be no herbicide spraying, no clear cutting, and no prescribed burning. BLM-administered lands within this area would be managed for VRM class II objectives.	Same as Alternative D except BLM-administered lands within one half mile of private lands in rural interface areas would be managed as discussed in Alternative D. Areas zoned for lots larger than 20 acres, but with tax lots of 20 acres or less and/or existing legal multiple residences, may also be addressed in this alternative.

and wildlife tree protection, and of providing for no specific protection of cavity nesters on suitable forest or woodland.

- Effects on ASQ and related jobs and county revenues, and on other relevant values, of substituting the next higher and the next lower alternative levels of riparian zone protection, and of providing only legally required protection of riparian zones to preserve commercial trees on suitable forest or woodland.

- Effects on ASQ and related jobs and county revenues, and on spotted owl populations (number of pairs), of substituting the next higher and the next lower alternative levels of old growth and mature forest protection, and of providing no specific old growth and mature forest protection on suitable forest or woodland.

The following additional sensitivity analyses will also be made:

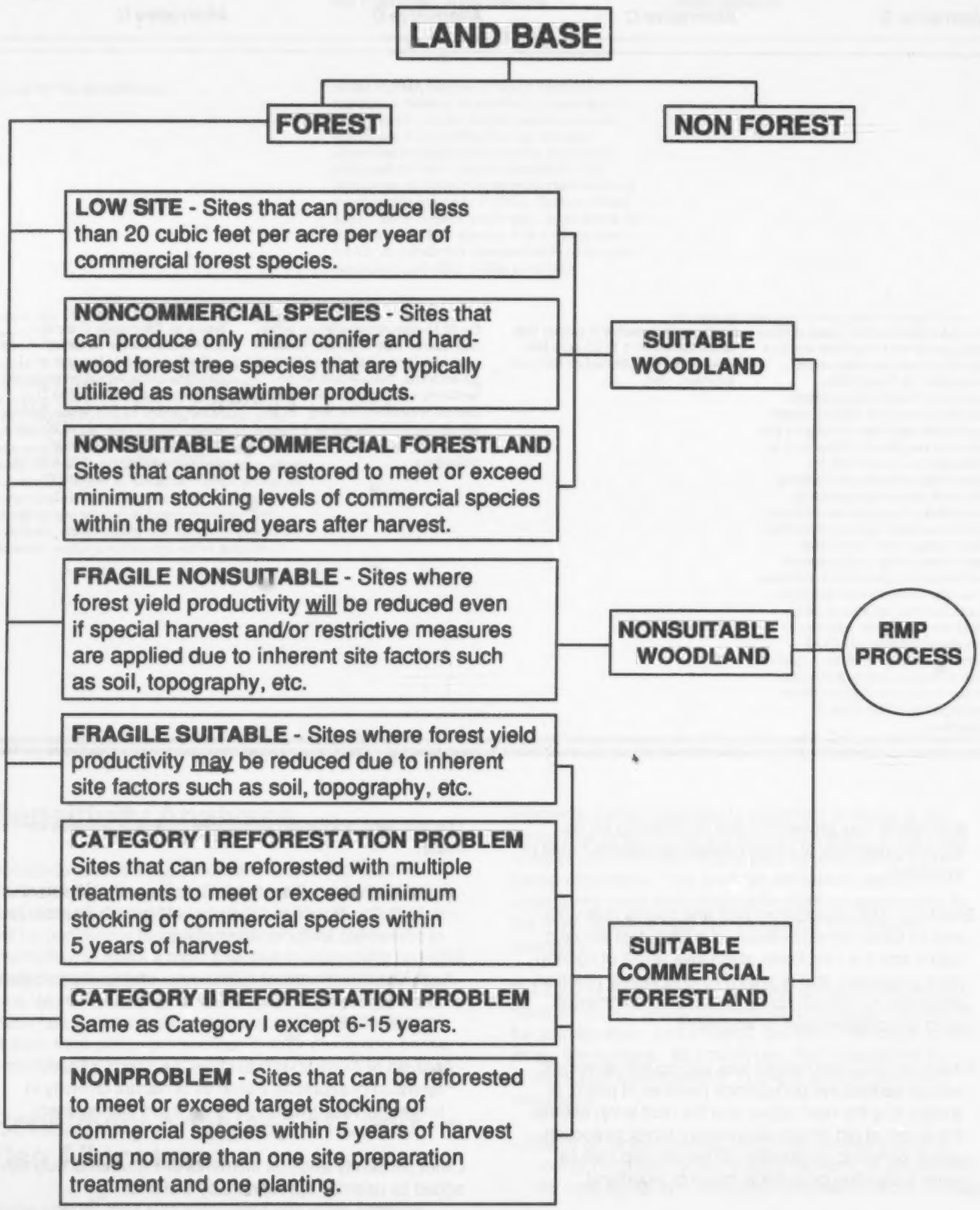
- Analysis of Alternatives C and D to show the effects of substituting extended rotation of old growth forest in lieu of no harvest for those alternatives.

- Analysis of Alternative B to show the effects of placing all lands allocated primarily to timber production on a rotation of 150 years.

- Analysis of Alternative B to show the effects of partial retention of structural elements of habitat diversity in timber harvest units under even-aged management.

Other sensitivity analysis elements or increments may be added as deemed appropriate by a district.

Figure 3-1


LAND BASE
FOREST
NON FOREST
LOW SITE - Sites that can produce less than 20 cubic feet per acre per year of commercial forest species.
NONCOMMERCIAL SPECIES - Sites that can produce only minor conifer and hardwood forest tree species that are typically utilized as nonsawtimber products.
NONSUITABLE COMMERCIAL FORESTLAND Sites that cannot be restored to meet or exceed minimum stocking levels of commercial species within the required years after harvest.
SUITABLE WOODLAND
FRAGILE NONSUITABLE - Sites where forest yield productivity will be reduced even if special harvest and/or restrictive measures are applied due to inherent site factors such as soil, topography, etc.
NONSUITABLE WOODLAND
RMP PROCESS
FRAGILE SUITABLE - Sites where forest yield productivity may be reduced due to inherent site factors such as soil, topography, etc.
CATEGORY I REFORESTATION PROBLEM Sites that can be reforested with multiple treatments to meet or exceed minimum stocking of commercial species within 5 years of harvest.
CATEGORY II REFORESTATION PROBLEM Same as Category I except 6-15 years.
NONPROBLEM - Sites that can be reforested to meet or exceed target stocking of commercial species within 5 years of harvest using no more than one site preparation treatment and one planting.
SUITABLE COMMERCIAL FORESTLAND

Estimated effects on ASQ, together with resulting local employment and county revenues for each analysis, will be quantified and arrayed as in Table 3-2. Effects on other resource attributes will be quantified only where available analytical techniques are readily applicable. Otherwise, effects will be compared to relevant environmental consequence conclusions for the basic plan alternatives.

Sensitivity Analysis of Timber Management Prescriptions

For the preferred alternative, the following potential nondeclining timber harvest levels (even flow) or potential allowable sale quantities will be calculated and displayed. Attendant local employment and county revenues will be identified, along with the related long term sustained yield of timber, and any other relevant, identifiable effects.

1. The nondeclining harvest level under the conditions de-

Table 3-2 Sensitivity Analysis of Land Use Allocations (partial example using common alternatives)

Allocation or Decision Element	Base Alternative	Allocation or Element From Alternative	ASQ Change	Local Employment Change	County Revenue Change	Other Effect Changes
Snag and Wildlife Tree Protection	B,C	D No Protection				
	D	C E No Protection				
Riparian Zone Protection	B	A C				
	C	A B D				
	D	A C E				
Old Growth and Mature Forest Protection	B	C No Protection Partial Retention of Structure				
	C	B D No Protection Partial Retention of Structure Extended Rotation				
	D	C E No Protection Extended Rotation				
Timber Harvest Rotation Length	B	150 Year Minimum				

scribed in the first two paragraphs of Guidance for All Common Alternatives for Issue 1.

2. The nondeclining harvest level if no stands younger than culmination of mean annual increment (CMAI) were planned for final harvest, and if all appropriate intensive management practices are applied. The number of years needed to reach CMAI would be determined separately for each selected site class, using appropriate growth and yield data simulation, such as the Stand Projection System Model or Organon. The site indexes to be used would be the same as those calculated from the extensive forest inventory and used in simulating growth and yield.

3. The nondeclining harvest levels if minimum average tree diameter of a stand to be harvested were constrained at 12 inches, at 16 inches, at 20 inches, and at 24 inches. The number of years needed to reach each size would be determined as in 2 above, based on growth and yield data.

4. The nondeclining harvest level if each of the following intensive management practices were not used (A separate calculation for each prospectively foregone practice):

- planting of genetically improved stock
- fertilization
- precommercial thinning
- commercial thinning
- brush and hardwood conversion

5. The nondeclining harvest level if only the base program (site preparation, planting including genetically improved stock, protecting seedlings, and plantation release) were funded; and fertilization, precommercial thinning, commercial thinning and stand conversion were foregone.

6. The nondeclining harvest level if prescribed burning were prohibited or abandoned for other reasons.

7. The nondeclining harvest level if all use of herbicides to aid timber production were prohibited, or abandoned for other reasons.

8. The nondeclining harvest level that would result if 5, 6 and 7 all occurred.

9. The nondeclining harvest level that would result if currently forested commercial forest lands that are expected to be economically infeasible to harvest were removed from the available forest land base. (To be displayed only in plans where the potential harvest level for a sustained yield unit would change by more than 1 MMBF.)

10. The nondeclining harvest level if intensive management practices considered economically marginal were not used.

11. The harvest level that would result if a departure of as much as 10 percent above the nondeclining harvest level shown in sensitivity analysis 2 were selected, provided that any increase does not exceed the long term sustained yield capacity. The harvest level in subsequent decades must not fall more than one percent below the nondeclining harvest level for sensitivity analysis 2. The potential departure would not exceed that needed to match recent timber supply levels in the market area, as defined by the Local Market Model being developed at the PNW Research Station, USFS. The period for which departure would be calculated would be the period of anticipated regional timber supply deficiency identified for the market area in recent studies.

These sensitivity analyses will assist BLM in identifying a proposed set of prescriptions for the preferred alternative. They will also identify the impacts of possible future adjustments in timber management prescriptions that may occur as a result of actions outside BLM's control.

Table 3-3. Sensitivity Analysis of Timber Management Prescriptions, Preferred Alternative

Sensitivity Analysis	ASQ	Local Employment	County Revenue	Other Effects
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				

*U.S. GOVERNMENT PRINTING OFFICE: 1991 - 591-222/21812